

Brad Botwin

From: Erika Maynard
Sent: Thursday, January 18, 2018 12:49 PM
To: Alexander Lopes; Steven Clagett; Chesebro, Jonathan
Cc: Matthew Borman; Brad Botwin
Subject: 232 Uranium - Exhibits
Attachments: 2018.01.16 - Exhibits to Petition.pdf

Good Afternoon,

Please find attached the Uranium 232 exhibits.

Thanks,
Erika

Erika Maynard
Special Projects Manager
U.S. Department of Commerce
Bureau of Industry and Security
Office of Technology Evaluation
erika.maynard@bis.doc.gov
Phone: (202) 482-5572

Brad Botwin

From: Speaker, Allison <allionspeaker@eversheds-sutherland.com>
Sent: Tuesday, January 16, 2018 6:48 PM
To: Brad Botwin; Erika Maynard
Cc: Herlach, Mark
Subject: Uranium - Exhibits
Attachments: 2018.01.16 - Exhibits to Petition.pdf

Hi, Brad and Erika –

Attached is an electronic version of the exhibits filed today with the uranium petition. Please let me know if you have any issues or questions.

Thanks,
Allison

Allison Speaker | Associate | Eversheds Sutherland (US) LLP

T: +1.202.383.0530
[Biography](#) | [vCard](#)

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Brad Botwin

From: Kathleen Barfield
Sent: Tuesday, March 06, 2018 5:34 PM
To: Brad Botwin; Erika Maynard; Mark Crawford
Subject: FW: 3.6.18 Briefing Book Asks
Attachments: Briefing Tasker 2.15.18.xlsx; Briefing Memo_Meeting with AHUG_021518.pdf

Need a briefing memo for Meeting w/ John Cash-CP of Regulatory Affairs-of UR Energy and Paul Goranson, EVP of ISR Operations for Energy Fuels, due March 9, meeting is March 13.

I have attached the briefer we did on AHUG, the AHUG bios did not include these gentlemen though it is not clear if they attended the previous meeting.

From: Alexander Zemek
Sent: Tuesday, March 06, 2018 5:25 PM
To: Kathleen Barfield <Kathleen.Barfield@bis.doc.gov>
Subject: FW: 3.6.18 Briefing Book Asks

Not sure if you saw this one that was added to the tracker today.
Alex

Meeting w/ John Cash-CP of Regulatory Affairs-of UR Energy and Paul Goranson, EVP of ISR Operations for Energy Fuels	External Meeting	Tuesday, March 13	BIS	Friday, March 9
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From: ExecSecBriefingBook [<mailto:execsecbriefingbook@doc.gov>]
Sent: Tuesday, March 06, 2018 4:58 PM
To: ExecSecBriefingBook <execsecbriefingbook@doc.gov>; Lesley.Elouaradia@trade.gov; McNeill, Valerie <Valerie.McNeill@trade.gov>; Andberg, Jennifer <JAndberg@doc.gov>; adam.sedgewick@nist.gov; Jocelyn.Burston@noaa.gov; Langdon, David <DLangdon@doc.gov>; Wasilewski, Jim <jwasilewski@ntia.doc.gov>; NGrove@doc.gov; SLeach@doc.gov; Maggi, David <dMaggi@doc.gov>; Jacobi, Will <wjacobi@doc.gov>; Jacob, Dana <DJacob@doc.gov>; GGardner@doc.gov; rturk@doc.gov; ZMichael@doc.gov; JARlett@eda.gov; Bonney, Linda <lbbonney@doc.gov>; Kimball, Kevin A <kevin.kimball@nist.gov>; Harman, Michelle C <michelle.harman@nist.gov>; Wasilewski, Jim <jwasilewski@ntia.doc.gov>; GCapella@ntis.gov; avi.bender@ntis.gov; Brigit.Baron@USPTO.GOV; Anthony.Twitty@USPTO.GOV; dstump@oig.doc.gov; BISExecSec <BISExecSec@bis.doc.gov>; ARankin@doc.gov; Foye-McFadden, Areaka <AFoye-McFadden@doc.gov>; Weiss, Michael <Michael.Weiss@noaa.gov>; Garret.Mitchell@trade.gov; AWilliams2@doc.gov; MDavidson@doc.gov; SPark-Su@doc.gov; PDavidson@doc.gov; MPlatt@doc.gov; KKelley@doc.gov; tnguyen1@doc.gov; Alexander Zemek <Alexander.Zemek@bis.doc.gov>; John.Cooney@trade.gov; Redl, David <dredl@ntia.doc.gov>; JUthmeier@doc.gov; judy.gault.sorrell@census.gov; Gallaudet, Timothy (Federal) <Timothy.Gallaudet@noaa.gov>; MBurgess@doc.gov; Wheeler, Kevin (Federal) <Kevin.Wheeler@noaa.gov>; Levenbach, Stuart (Federal) <Stuart.Levenbach@noaa.gov>; DBarnes2@doc.gov
Subject: 3.6.18 Briefing Book Asks

NEW / UPDATED:

Meeting with Korean Trade Minister	External Meeting	Wednesday, March 7	ITA	Tuesday, March 6
Call w Gov Pete Ricketts	Call	Friday, March 9	OLIA	Wednesday, March
Meeting w/ John Cash-CP of Regulatory Affairs-of UR Energy and Paul Goranson, EVP of ISR Operations for Energy Fuels	External Meeting	Tuesday, March 13	BIS	Friday, March 9
Meeting w/ Airbus CEO Dirk Hoke	External Meeting	Thursday, March 15	ITA	Monday, March 12
Mtg w American Forest and Paper Association	External Meeting	Tuesday, March 20	ITA	Friday, March 16
American Cable Association	Remarks	Wednesday, March 21	NTIA / w OPA providing remarks	Thursday, March 8
Remarks - APEC	Remarks	Monday, March 26	ITA / w OPA providing remarks	Monday, March 12

REMINDER:

Meeting w/ Craig Anneberg CEO of NORPAC Paper & John Georges a Principal from One Rock Capitol	External Meeting	Wednesday, March 7	ITA	Tuesday, March 6
Michael Evans, President of Alibaba	External Meeting	Thursday, March 8	ITA	Tuesday, March 6
American Enterprise Institute Dinner	Event	Thursday, March 8	ITA	Tuesday, March 6
American Enterprise Institute World Forum	Remarks	Friday, March 9	ITA w/ OPA Providing Remarks	Wednesday, February 28
Satellite Industry Association Leadership Dinner	Remarks	Monday, March 12	NOAA w/ OPA Providing Remarks	Monday, February 20

(b) (4), (b) (5)

From: Jonathan Chesebro

Sent: Friday, March 23, 2018 5:10 PM

To: Brad Botwin <Brad.Botwin@bis.doc.gov>; Erika Maynard <Erika.Maynard@bis.doc.gov>; Sally Gannon <Sally.Gannon@trade.gov>; Devin Horne <Devin.Horne@trade.gov>; Man Cho <Man.Cho@trade.gov>; Steven Clagett <Steven.Clagett@bis.doc.gov>; David Mason <David.Mason@trade.gov>; David Richardson <David.Richardson@trade.gov>; Lee Smith <Lee.Smith@trade.gov>; Constance Handley <Constance.Handley@trade.gov>; Carole Showers <Carole.Showers@trade.gov>; David Cordell <David.Cordell@trade.gov>; Jill Buckles <Jill.Buckles@trade.gov>; Julian Richards <Julian.Richards@trade.gov>; Chris Rasmussen <Chris.Rasmussen@trade.gov>

Cc: Adam OMalley <Adam.OMalley@trade.gov>

Subject: Follow-up from March 9 Mtg on DOC Coordination re Uranium 232 Petition

Hi everyone,

Per discussion at our March 9 meeting on DOC Coordination re the Uranium 232 Petition, the group agreed to form a DOC Working Group on the Uranium 232 Petition to coordinate DOC activities related to the Uranium 232 Petition and any potential future investigation. This group will meet as needed to discuss DOC activities related to the Uranium 232 Petition and any potential future investigation. This is an informal group that is meant to facilitate internal DOC communication.

At the March 9 meeting, attendees agreed to create a document that outlines the WG members, their area of expertise, and their contact information. Attached is a draft of this document.

- By COB Tuesday March 27, please email me any corrections/edits to your information that is in this document.
- In some places I tried to note what an individual's area of expertise is, but since you all know your area of expertise best, please update this row as needed.
- Please add or remove individuals as needed – the folks listed in this document are my best attempt to include everyone with an interest/expertise on this topic.

Thanks everyone for your help. Please email or call with any questions.

Best,
Jonathan Chesebro
Senior Nuclear Trade Specialist
U.S. Department of Commerce, International Trade Administration
Industry & Analysis -- Office of Energy & Environmental Industries
Office: (202) 482-1297
Mobile: (202) 603-4968

Hi everyone,

Below is a brief agenda for the March 9th meeting meeting.

Also attaching the presentation that the Ad Hoc Utilities Group (AHUG) gave to DOC during an early Feb meeting re their opposition to the 232 petition.

AGENDA

- Update on Uranium 232 Petition (BIS)
- Update on Russian Uranium Antidumping Suspension Agreement and its potential impact on a 232 investigation (ITA/E&C)
- Discussion (All)
 - In the event that a 232 investigation occurs, what industry outreach is planned? How can DOC effectively coordinate internally throughout the 232 process (e.g. establish internal DOC WG)?
- Next Steps

Best,
Jonathan

Hi everyone,

ITA DAS for Manufacturing Ian Steff asked me to convene an internal DOC meeting to coordinate our positions on the Uranium 232 Petition.

Brad – this is the meeting we spoke about last Friday.

- BIS: Brad Botwin, Erika Maynard, Steve Clagett
- ITA/I&A/Office of Energy & Environmental Industries: Jonathan Chesebro, Devin Horne, Man Cho
- ITA/E&C: Sally Gannon

I'm hoping that 9am this Friday works for folks to attend since I understand that the White House plans to convene a PCC on this topic at 11am this Friday.

Please share this with others in DOC that you think should attend.

Thanks,

Jonathan Chesebro

Senior Nuclear Trade Specialist

U.S. Department of Commerce, International Trade Administration

Industry & Analysis -- Office of Energy & Environmental Industries

Office: (202) 482-1297

(b) (6)

Brad Botwin

From: Michael Vaccaro
Sent: Tuesday, May 01, 2018 1:01 PM
To: Richard Ashooh; Teague, Anne (Federal)
Cc: Brad Botwin
Subject: RE: Meet with Earl Comstock - Centrus Energy Corp.

+ Rich

Rich - Centrus is the former US Enrichment Corp. They sent a letter to the Secretary on 3/14. They argue that a Section 232 investigation is not necessary and that the concerns raised by the petitioners should be wrapped into the WH's ongoing nuclear energy policy review.

-----Original Message-----

From: Matthew Borman
Sent: Tuesday, May 01, 2018 12:55 PM
To: Teague, Anne (Federal) <ATEague@doc.gov>
Cc: Michael Vaccaro <Michael.Vaccaro@bis.doc.gov>; Brad Botwin <Brad.Botwin@bis.doc.gov>
Subject: RE: Meet with Earl Comstock - Centrus Energy Corp.

Thanks Anne. I don't think we have met with Centrus before but I am recused from the uranium 232 matter, so copying Mike and Brad.

Matt

-----Original Message-----

From: Teague, Anne (Federal) [mailto:ATEague@doc.gov]
Sent: Tuesday, May 01, 2018 11:26 AM
To: Matthew Borman
Subject: FW: Meet with Earl Comstock - Centrus Energy Corp.

Matt-

Have you met with Centrus before? I know there is a 232 petition on uranium so just making sure.

Thanks,

Annie

From: Howe, James C [mailto:(b) (6)]
Sent: Thursday, March 15, 2018 1:48 PM

To: Leach, Macie (Federal) <SLeach@doc.gov>

Cc: Howe, James C (b) (6)

Subject: Meet with (b) (6)

Hi Macie:

Jim Howe from Centrus Energy here. We met last year when I visited with Earl Comstock, and later when our CEO paid a courtesy call on Sec. Ross. I hope this email finds you well.

If you are still working as part on Earl's team, I was hoping to find a way to arrange a meeting between him and our CEO. I've reached out directly to Earl by email but expect that due to his high level of "busy-ness," he probably has not had a chance to see it. Our desire is to have a discussion that provides Earl an overview of our company's unique role in the domestic uranium fuel market (we are the only U.S. company that does what we do), particularly in light of the increased attention being paid to protecting vital domestic industries.

Anyway, if you get this email and can help me set something up (or point me in the right direction), I'd be most grateful. Thanks very much for your help and advice.

Best regards - Jim

Jim Howe

Vice President, Government Relations

Centrus Energy Corp.

(202)525-5517 (desk)

(b) (6)

Brad Botwin

From: Speaker, Allison <allisonspeaker@eversheds-sutherland.com>
Sent: Friday, April 27, 2018 1:16 PM
To: Brad Botwin
Cc: Erika Maynard; Herlach, Mark
Subject: RE: Uranium materials
Attachments: Mark Chalmers and Jeff Klenda Op Ed.pdf; Tom Duesterberg.pdf

Hi, Brad – apologies for the issues with the links. The articles are attached.

Thanks,
Allison

Allison Speaker | Associate | T: (b) (6)

From: Speaker, Allison (b) (6)
Sent: Friday, April 27, 2018 12:30 PM
To: Brad Botwin <Brad.Botwin@bis.doc.gov>; Erika Maynard <Erika.Maynard@bis.doc.gov>
Cc: Herlach, Mark (b) (6)
Subject: RE: Uranium materials

Hi, Brad and Erika –

I think there may be an issue with the links below, so I am providing them again in case they did not work.

<https://www.washingtonexaminer.com/opinion/op-eds/weve-entered-a-new-nuclear-cold-war-with-russia>

<https://www.forbes.com/sites/thomasduesterberg/2018/04/26/the-right-industry-for-a-section-232-review/#2d203b556c83>

Thanks,
Allison

Allison Speaker | Associate | T: (b) (6)

From: Speaker, Allison
Sent: Friday, April 27, 2018 12:12 PM
To: 'Brad Botwin' <Brad.Botwin@bis.doc.gov>; 'Erika.Maynard@bis.doc.gov' <Erika.Maynard@bis.doc.gov>
Cc: Herlach, Mark (b) (6)
Subject: Uranium materials

Hi, Brad and Erika –

We just wanted to pass along a letter and a few recent articles discussing the Petition that we thought may be of interest. Attached is a letter from the Wyoming Mining Association in support of the investigation. Below is a link to an op-ed written by Mark Chalmers and Jeff Klenda as well as a link to an article written by Tom Duesterberg in support of the Petition.

Mark Chalmers and Jeff Klenda Op-Ed: <https://www.washingtonexaminer.com/opinion/op-eds/weve-entered-a-new-nuclear-cold-war-with-russia>

Tom Duesterberg Article: <https://www.forbes.com/sites/thomasduesterberg/2018/04/26/the-right-industry-for-a-section-232-review/#466516436c83>

Please let us know if you have any questions or need anything additional.

Thanks,
Allison

Allison Speaker | Associate | Eversheds Sutherland (US) LLP

T: +1 (b) (6)
[Biography](#) | [vCard](#)

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Brad Botwin

From: Julie Al-Saadawi <Julie.Al-Saadawi@trade.gov>
Sent: Thursday, April 12, 2018 3:48 PM
To: Erika Maynard; Brad Botwin
Subject: inside us trade

Critical minerals list seen by some as 'road map' for future 232 probes

April 12, 2018

A list of critical minerals recently published by the Interior Department could be used by President Trump to guide future Section 232 investigations that could be focused on China, sources close to the administration told *Inside U.S. Trade*.

The Interior secretary on Feb. 16 published [a draft list](#) of 35 critical minerals on which the U.S. is said to be heavily import-reliant. "These commodities merit consideration in furthering the policy of the Federal Government to reduce the Nation's vulnerability for the security and prosperity of the United States," the *Federal Register* notice states. **China is a leading global producer of 19 of the 35 minerals listed and, according to the National Minerals Information Center, a primary source of U.S. imports for nine of 13 minerals for which the U.S. is considered "highly import-reliant."**

The list was called for in [a Dec. 20, 2017, executive order](#) on the "Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals."

"This dependency of the United States on foreign sources creates a strategic vulnerability for both its economy and military to adverse foreign government action, natural disaster, and other events that can disrupt supply of these key minerals," the order states.

The administration is in the process of determining country and product exclusions for Section 232 tariffs imposed on steel and aluminum imports. Those investigations were initiated last April.

"Look at the executive orders the administration is pushing out -- they are doing all of this in a very strategic way to box in our near peers, Russia and China, in what's part of a very deliberate strategy," one source close to the administration told *Inside U.S. Trade*. "Guess what's next on the agenda? Just look at the road map in the draft list of critical minerals for clues."

Dan DiMicco, a member of the Advisory Committee for Trade Policy and Negotiations and a former CEO of Nucor, a steel company, on March 1 told CNBC that the Trump administration was "just getting started" on national security-based trade actions. DiMicco was interviewed about [Trump's announcement](#) of the global steel and aluminum tariffs. DiMicco said he expected more Section 232 investigations would be initiated for "critical industries that guide our economy."

The Commerce Department, according to its fiscal year [2019 budget justification document](#), wants to create teams within the Bureau of Industry and Security and International Trade Administration dedicated to conducting Section 232 investigations into the effect of imports on national security. Commerce is anticipating new Section 232 probes that could be initiated by industry sectors, agency heads, or the Commerce secretary, the document says.

Last June, Commerce Secretary Wilbur Ross said the administration was "surely" considering the [initiation of additional Section 232](#) investigations, flagging the semiconductor industry as an area of concern.

The Commerce Department, in conjunction with the Office of the U.S. Trade Representative and other agencies, has until Aug. 17 to prepare a report on the critical minerals strategy and submit it to the president. The report will include "options for accessing and developing critical minerals through investment and trade with our allies and partners."

The draft list includes "aluminum (bauxite), antimony, arsenic, barite, beryllium, bismuth, cesium, chromium, cobalt, fluor spar, gallium, germanium, graphite (natural), hafnium, helium, indium, lithium, magnesium, manganese, niobium, platinum group metals, potash, rare earth elements group, rhenium, rubidium, scandium, strontium, tantalum, tellurium, tin, titanium, tungsten, uranium, vanadium, and zirconium."

These minerals, according to the Department of Interior, are used in the aerospace, defense, energy, telecommunications and transportation sectors.

The list of critical minerals was subject to public comments up through March 19 and more than 550 comments were received.

Bill Jensen, president of the Minerals and Mining Advisory Council, told *Inside U.S. Trade* his group met with White House officials in mid-March to discuss the executive order and argue that "all aspects of mining" were critical to

national security. MMAC submitted its official comments to Trump and other key administration officials, including Commerce Secretary Wilbur Ross and White House trade adviser Peter Navarro, on March 12.

The Commerce Department's Bureau of Industry and Security is reviewing whether to initiate [a Section 232 probe into uranium imports](#) after two uranium mining companies filed a petition in January. According to a Commerce Department official, there is "no deadline for completion of this initial review, but Commerce will look to conclude its review in a timely manner."

One international trade lawyer said a uranium probe likely will be initiated soon, citing language in the Section 232 statute that states the Commerce Department "shall immediately initiate an appropriate investigation to determine the effects on the national security of imports of the article" in question.

U.S. uranium mining companies Ur-Energy and Energy Fuels Resources Inc., argue that because of surges in imports from state-sponsored producers in Russia, Kazakhstan, Uzbekistan and China in particular, the U.S. capacity to enrich uranium "for defense purposes" has been decimated.

Rep. Raul Grijalva (D-AZ), ranking member of the House Natural Resources Committee, last month questioned the Interior Department's decision to include uranium on the draft minerals list. He called the move "unjustified" because there is a "significant abundance around the world" and a "secure supply chain."

"Simply being important for a sector of the economy and primarily imported does not qualify a mineral as 'critical,' particularly if there is little risk of a supply disruption," Grijalva said in a March 19 submission.

According to DOI's draft list, China is a top global producer of 19 of the 35 elements listed, while the U.S. is a top producer of just beryllium and helium. The agency also flags China as a top U.S. supplier for 13 of the elements. The trade lawyer said China has used critical minerals and other resources in ways "that are not purely commercial," citing a 2012 [World Trade Organization challenge](#) the U.S. brought against Beijing over its export restrictions on rare earth elements, which are commonly used in the manufacturing of technology products.

The U.S., joined by several other countries, argued China's export quotas and duties on rare earth materials violated China's WTO commitments on export taxes as outlined in Article XI of the General Agreement on Tariffs and Trade, which generally prohibits quantitative restrictions on the trade of member countries' products. In 2014, the WTO ruled against China, which led China to drop the export quotas in 2015.

"China has been the top offender when it comes to rare earths," the trade lawyer said. "So, when we are talking about the future of energy and technology, some of the things on this list are quite important. So, there's been some discussion recently [about] 'Do we have enough of it here in the States'"

The attorney also pointed to a dispute between China and Japan as more evidence for why the U.S. should significantly reduce its reliance on rare earth imports from China. In 2010, Beijing reportedly blocked shipments of rare earth materials to Japan after a Chinese vessel was indefinitely detained.

Analysts with the National Minerals Information Center, in [an April 2 article](#) published by the National Academy of Sciences, said that for a certain group of minerals, the U.S. is "highly import-reliant," while China is not. "China is a leading source of U.S. imports for 9 of 13 minerals" in this category, the analysts continue, which, in turn, could "pose a supply risk" to U.S. manufacturing industries. Those minerals include antimony, bismuth, cobalt, gallium, germanium, indium, tellurium, yttrium and rare earth minerals. The production of these minerals, the authors say, is "extremely concentrated," indicating that China is the "dominant producer of these minerals globally." -- Isabelle Hoagland (ihogland@iwppnews.com)

Julie Al-Saadawi
 Director, Industry Monitoring and Analysis Unit (IMAU)
 Office of Policy, Enforcement and Compliance
 Industry Monitoring and Analysis Unit, ITA/DOC
 202 482 1930 / Julie.al-saadawi@trade.gov

<http://trade.gov/steel>

Brad Botwin

From: ASHKEBOUSSI, Nima <nxa@nei.org>
Sent: Thursday, March 22, 2018 12:57 PM
To: Brad Botwin
Cc: Erika Maynard
Subject: RE: Section 232 Uranium Petition

Hi Brad,

Can you confirm the time and location. Thanks.

From: Brad Botwin [mailto:Brad.Botwin@bis.doc.gov]
Sent: Wednesday, March 21, 2018 9:32 AM
To: ASHKEBOUSSI, Nima
Cc: Erika Maynard
Subject: Re: Section 232 Uranium Petition

Nima, the government is closed today because of the weather. Hopefully I can get in tomorrow and confirm a time for us to meet on Friday. Brad

This Message was sent from my Mobile Device.

On: 21 March 2018 08:07, "ASHKEBOUSSI, Nima" <nxa@nei.org> wrote:

Hi Brad,

Can you please confirm that March 23 meeting time and Department of Commerce staff that will be participating.

Thanks,
Nima

From: ASHKEBOUSSI, Nima
Sent: Wednesday, March 14, 2018 8:38 PM
To: 'Brad Botwin'
Cc: Erika Maynard
Subject: RE: Section 232 Uranium Petition

Brad,

Thank you for the quick reply and I understand how overwhelming the steel and aluminum work must be right now. March 23 works for us. We can meet anytime between 9-2. Please let me know what is best for in the window and we'll be there.

Nima

From: Brad Botwin [<mailto:Brad.Botwin@bis.doc.gov>]
Sent: Wednesday, March 14, 2018 6:15 PM
To: Chesebro, Jonathan; ASHKEBOUSSI, Nima
Cc: Erika Maynard; Devin Horne
Subject: RE: Section 232 Uranium Petition

Nema,

With much activity taking place right now on Steel and Aluminum, I would appreciate if we could delay a meeting to the afternoon of March 22 or anytime on March 23. Please feel free however to forward any position paper to us in advance of our meeting.

Thanks.

Brad Botwin
202-482-4060

From: Jonathan Chesebro [<mailto:Jonathan.Chesebro@trade.gov>]
Sent: Wednesday, March 14, 2018 5:56 PM
To: ASHKEBOUSSI, Nima <nxa@nei.org>
Cc: Brad Botwin <Brad.Botwin@bis.doc.gov>; Erika Maynard <Erika.Maynard@bis.doc.gov>; Devin Horne <Devin.Horne@trade.gov>
Subject: Re: Section 232 Uranium Petition

Hi Nima,

Brad Botwin and Erika Maynard in BIS are the folks to talk to. Looping them in here.

Best,

Jonathan

Sent from my iPhone

On Mar 14, 2018, at 3:48 PM, ASHKEBOUSSI, Nima <nxa@nei.org> wrote:

Hi Jon,

NEI now has finalized our position on the Section 232 uranium petition and we're interested in chatting with BIS staff. Do you have a suggestion for point of contact in BIS we should arrange a meeting with?

Thanks,
Nima

[<image003.jpg>](#)

Nima Ashkeboussi | Director, Fuel Cycle Programs
1201 F Street, NW, Suite 1100 | Washington, DC 20004
P: 202.739.8022 M: 202.375.0490
nxa@nei.org
nei.org

Brad Botwin

From: Welling, Craig (b) (6)
Sent: Monday, March 12, 2018 6:01 PM
To: Brad Botwin; Herman, Cheryl; Welling, Craig
Subject: FW: Uranium 232 Petition

Brad,
Could you help us on this by confirming the message and any other information we should have before arranging a call?
Thank you,
Craig

From: Paul Goranson (b) (6)
Date: Monday, Mar 12, 2018, 5:34 PM
To: McGinnis, Edward (b) (6)
Cc: Welling, Craig (b) (6)
Subject: Uranium 232 Petition

Ed,

UR Energy and Energy Fuels met with Secretary Ross this afternoon. In that meeting, inventories and future needs came up. He suggested that we meet with you folks and NNSA as soon as possible. We are in DC through Thursday. Do you have time for a call tomorrow?

Best regards,
Paul Goranson

William Paul Goranson, P.E.
Chief Operating Officer
Energy Fuels Resources (USA) Inc.
225 Union Blvd. Suite 600, Lakewood, CO 80228
(b) (6)

Brad Botwin

From: Welling, Craig (b) (6)
Sent: Monday, March 12, 2018 6:01 PM
To: Brad Botwin; Herman, Cheryl; Welling, Craig
Subject: FW: Uranium 232 Petition

Brad,
Could you help us on this by confirming the message and any other information we should have before arranging a call?
Thank you,
Craig

From: Paul Goranson (b) (6)
Date: Monday, Mar 12, 2018, 5:34 PM
To: McGinnis, Edward (b) (6)
Cc: Welling, Craig (b) (6)
Subject: Uranium 232 Petition

Ed,

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Best regards,
Paul Goranson

William Paul Goranson, P.E.
Chief Operating Officer
Energy Fuels Resources (USA) Inc.
225 Union Blvd. Suite 600, Lakewood, CO 80228
(b) (6)

Brad Botwin

From: Jonathan Chesebro <Jonathan.Chesebro@trade.gov>
Sent: Wednesday, March 07, 2018 9:54 AM
To: Brad Botwin
Subject: RE: 232 Petition Update for ITA U/S Nominee Gil Kaplin's Transition Book

Thanks Brad

Jonathan Chesebro
Senior Nuclear Trade Specialist
U.S. Department of Commerce, International Trade Administration
Industry & Analysis -- Office of Energy & Environmental Industries
Office: (202) 482-1297
(b) (6)

From: Brad Botwin [mailto:Brad.Botwin@bis.doc.gov]
Sent: Tuesday, March 6, 2018 7:40 PM
To: Jonathan Chesebro <Jonathan.Chesebro@trade.gov>
Subject: Re: 232 Petition Update for ITA U/S Nominee Gil Kaplin's Transition Book

Looks good. Brad

This Message was sent from my Mobile Device.

On: 06 March 2018 11:01, "Jonathan Chesebro" <Jonathan.Chesebro@trade.gov> wrote:
Brad and Erika,

We have been asked to provide a brief civil nuclear industry background paper for ITA U/S nominee Gil Kaplan's Transition Book, to include a brief paragraph on the uranium 232 petition.

I pulled the below language from the BIS Briefing Paper for the Feb 28 Concall with NNSA U/S Menezes and input you provided for the Briefing Paper for Sec Ross's participation in the March 15 CINTAC meeting.

Does this look ok to you?

Please feel free to modify as needed. Hoping to get your input by 2pm today (the paper is due at 3pm).

- Uranium 232 Petition: On January 16, 2018, two U.S. uranium mining companies (Ur-Energy and Energy Fuels) submitted a petition to DOC/BIS for relief under Section 232 of the Trade Expansion Act of 1962 from imports of uranium products that threaten national security. Imports of uranium currently account for 96 percent of U.S. consumption (Kazakhstan is largest exporter to United States). BIS is currently evaluating the petition and plans to make a recommendation to the Secretary in the next few weeks regarding whether to proceed with a Section 232 investigation.

Thanks,

Jonathan Chesebro
Senior Nuclear Trade Specialist
U.S. Department of Commerce, International Trade Administration
Industry & Analysis -- Office of Energy & Environmental Industries
Office: (202) 482-1297

(b) (6)

From: Rachel Krushinski [<mailto:Rachel.Krushinski@trade.gov>]
Sent: Thursday, March 1, 2018 11:26 AM
To: MFGDOCS <MFGDOCS@trade.gov>; Ellen Bohon <Ellen.Bohon@trade.gov>; Adam OMalley <Adam.OMalley@trade.gov>; Man Cho <Man.Cho@trade.gov>; Bart Meroney <Bart.Meroney@trade.gov>; Scott Kennedy <Scott.Kennedy@trade.gov>; Jennifer Boger <Jennifer.Boger@trade.gov>; Robin Roark <Robin.Roark@trade.gov>; Andres Castrillon <Andres.Castrillon@trade.gov>; Brandie Baggatts <Brandie.Baggatts@trade.gov>; Ingrid Mitchem <Ingrid.Mitchem@trade.gov>; Christine Simmons <Christine.Simmons@trade.gov>; Cecelia Williams <Cecelia.Williams@trade.gov>; Paul Thanos <Paul.Thanos@trade.gov>; Krysten Jenci <Krysten.Jenci@trade.gov>; Paulette Hernandez <Paulette.Hernandez@trade.gov>; Michael Fuchs <Michael.Fuchs@trade.gov>; Shannon Coe <Shannon.Coe@trade.gov>; Christine Agoo <Christine.Agoo@trade.gov>; Alysha Taylor <Alysha.Taylor@trade.gov>; Maureen Smith <Maureen.Smith@trade.gov>; Jim Rice <Jim.Rice@trade.gov>; Lucrecia Santiago <Lucrecia.Santiago@trade.gov>; Janet Heinzen <Janet.Heinzen@trade.gov>; Gary Stanley <Gary.Stanley@trade.gov>; Kim Copperthite <Kim.Copperthite@trade.gov>; Salim Bhabhrawala <Salim.Bhabhrawala@trade.gov>; Brian Ledgerwood <Brian.Ledgerwood@trade.gov>; Robert Shaw <Robert.Shaw@trade.gov>; Joanne Littlefair <Joanne.Littlefair@trade.gov>; John Meakem <John.Meakem@trade.gov>; Richard Stetson <Richard.Stetson@trade.gov>; Terry Labat <Terry.Labat@trade.gov>; Yolanda Peterson <Yolanda.Peterson@trade.gov>; Paul Morris <Paul.Morris@trade.gov>; Heather Connell <Heather.Connell@trade.gov>; Michael Thompson <Michael.Thompson@trade.gov>; Deborah Misouria <Deborah.Misouria@trade.gov>; Anne Grey <Anne.Grey@trade.gov>; Vidya Desai <Vidya.Desai@trade.gov>; Frank Spector <Frank.Spector@trade.gov>; Jamie Merriman <Jamie.Merriman@trade.gov>; Elizabeth Clark <Elizabeth.Clark@trade.gov>; Latonya Pickeral <Latonya.Milstead@trade.gov>; Eileen Hill <Eileen.Hill@trade.gov>; Joseph Flynn <Joseph.Flynn@trade.gov>; Stevan Mitchell <Stevan.Mitchell@trade.gov>; Edward Dunn <Edward.Dunn@trade.gov>; Tsedale Assefa <Tsedale.Assefa@trade.gov>; Anne Flatness <Anne.Flatness@trade.gov>; Chris Rosettie <Chris.Rosettie@trade.gov>; Jean Janicke <Jean.Janicke@trade.gov>; Natalie Soroka <Natalie.Soroka@trade.gov>; Michael Boyles <Michael.Boyles@trade.gov>; Renee Hancher <Renee.Hancher@trade.gov>; Rose Williams <Rose.Williams@trade.gov>; Julie Heizer <Julie.Heizer@trade.gov>; Isabel Hill <Isabel.Hill@trade.gov>; Schermin Smiley <Schermin.Smiley@trade.gov>; Brian Beall <Brian.Beall@trade.gov>
Cc: Alexis Haakensen <Alexis.Haakensen@trade.gov>; Sylvia Prosak <Sylvia.Prosak@trade.gov>
Subject: TASK ASSIGNMENT: "Updates to Gil's Transition Book" - Control No: ODUS-2018-00086

Please see complete instructions in tasker. Do not rely solely on this email. There is additional guidance from Anne in the tasker. Thank you!

(All additions/updates should be highlighted in YELLOW.)

Rachel

=====

*****Please Do Not Reply to this email, if you have any questions please contact Sylvia or Rachel *****

A new Tasker Document has been assigned to your Office on 3/1/2018.

This Task is due to I&A on Tue 03/06 at 01:00 PM.

Please review the task below and update the status for your office in the I&A Tasking Database.

To view this Tasker click the attached doclink==>

[Click here to open the I&A Tasking Database](#)

Deadline to ODUS:	Wed 03/07 at 05:00 PM		
Lead Action Office:	(1) MFG, (2) OACIO, (3) SVCS, (4) TCGM, (5) TAS, (6) TPP, (7) SP, (8) TPA, (9) NTTO	Principal:	

Event Details

Date/Time:	Date not set	Location:	
Prebrief:	TBD		
Contact Info:			
Additional Information:	<p>Units-Please update sections C and D, using the link below, on the Word Document. (sections A and B by the Management Council). Please make any additions/edits by COB on Wednesday, March 7, 2018.</p> <p>https://itaisinternationaltrade-my.sharepoint.com/:w:/g/personal/garret_mitchell_trade_gov/EdakP7okttNCpfgh6Xnhkw4BAOdK6kozLtmabQI</p> <p>ITA units are asked to update the current draft of the transition book for the future Under Secretary for ITA. The updated November so we expect there will be updates. If units would like to remove or add issue papers please example, Acting DUS noted about possibly adding KORUS, PAC-DBIA, Puerto Rico (Pat K.), etc, especially if they are of interest to Fifth Floor and/or that Gil is suggested to have a briefing on this issue.</p>		

Brad Botwin

From: Speaker, Allison <allisonspeaker@eversheds-sutherland.com>
Sent: Tuesday, February 20, 2018 1:17 PM
To: Brad Botwin; Erika Maynard
Cc: Herlach, Mark
Subject: Congressional Support for Uranium Petition
Attachments: Sec. 232 Uranium Letter Signed.pdf; America's Self-Imposed Uranium Shortage - WSJ.PDF; Barrasso Supports Investigation into Ru...pdf

Hi, Brad and Erika –

Attached are several documents related to the uranium investigation that we wanted to bring to your attention. First is a bipartisan congressional letter in support of the Petition, which was sent to Secretary Ross with copies to Secretary Perry, Secretary Mattis, and Under Secretary Ricardel. Also attached is the press release from Senator Barrasso announcing his support of the petition as well as a related op-ed published by Senator Barrasso in the Wall Street Journal.

Please let us know if you have any questions, would like to discuss, or need any additional information.

Thanks,
Allison

Allison Speaker | Associate | Eversheds Sutherland (US) LLP

T: +1.202.383.0530
[Biography](#) | [vCard](#)

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Congress of the United States
Washington, DC 20515

February 16, 2018

Honorable Wilbur Ross, Secretary
U.S. Department of Commerce
1401 Constitution Avenue NW
Washington D.C. 20515

Dear Secretary Ross:

We write today to reiterate the concerns raised by the uranium industry in their Section 232 petition requesting that the Commerce Department investigate the effects of uranium imports, particularly from foreign state-owned firms, on America's national security. The national security risks of foreign dependence on uranium merit an expedited investigation and effective response. The proposed uranium trade policy adjustments in the Section 232 petition align with the administration's efforts to promote energy independence and American jobs and decrease dependence on foreign critical minerals.

While the United States was once a global leader in uranium production, domestic uranium concentrate production is on track to hit the lowest level since 1952. The domestic uranium industry currently supplies less than five percent of our domestic uranium needs, leaving the United States dependent on foreign sources—largely from Russia and Kazakhstan—for a mineral that is a critical component of our electric grid and our national security.

This is not due to lack of resources; the Department of Energy estimates the United States uranium industry has the capacity to provide sixty percent of domestic fuel requirements. Yet despite these vast uranium deposits, we are now on the verge of losing our domestic uranium mining, our only conversion facility, and our only enrichment facility. The uranium industry has lost over half of its workforce over the past five years and market prices remain well below average production costs largely due to state-sponsored foreign producers who undermine our market.

In addition to losing an economic engine that is vital to our states and many of our local economies, there are severe national security implications to current uranium trade imports. The heavy dependence on foreign sources for the fuel powering our commercial reactors that produce 20% of our electric grid power puts the reliability of our critical infrastructure at risk. By ceding leadership in high-tech nuclear technologies, we also are giving other nations a clear advantage in making future nuclear advances and in determining international parameters for safety, security, and nonproliferation.

A robust domestic uranium industry is also critical for our long-term national security strategy. U.S. uranium is a critical component of the U.S. nuclear arsenal and the strategic deterrence mission that has kept our nation safe for nearly 75 years. U.S.-mined uranium is also used to power our submarines and aircraft carriers that are the backbone of the Navy fleet. These key defense purposes highlight why U.S. uranium should be utilized. Preventing foreign competition from undermining American uranium producers is therefore essential to meet our long-term national security needs.

Given these pressing national security and critical infrastructure implications, we support the uranium industry's Section 232 petition and respectfully urge the Department of Commerce to give it quick, full and fair consideration.

Sincerely,



Steve Pearce
Member of Congress



Liz Cheney
Member of Congress



Vicente Gonzalez
Member of Congress



Paul Gosar
Member of Congress



Doug Lamborn
Member of Congress



Scott Tipton
Member of Congress

CC: Secretary Perry (DOE)
Secretary Mattis (DOD)
Under Secretary Ricardel (DOC, BIS)

THE WALL STREET JOURNAL.

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<https://www.wsj.com/articles/americas-self-imposed-uranium-shortage-1518047294>

OPINION | COMMENTARY

America's Self-Imposed Uranium Shortage

The U.S. and its allies have plenty, but we still buy from despots.

By John Barrasso

Feb. 7, 2018 6:48 p.m. ET

Uranium plays a vital role in maintaining America's national security. The element powers nearly a quarter of the U.S. Navy's fleet and keeps the lights on in around 20% of American homes and businesses. So why is the U.S. relying on adversaries to supply it with uranium?

The American West—including my home state of Wyoming—is rich in uranium. In 2016, commercial nuclear power plants purchased 50.6 million pounds of uranium, according to the Energy Information Administration. The U.S. could produce tens of millions of pounds a year, relying on friendly countries like Canada or Australia for the remainder. Yet the element often comes from nations like Russia, Kazakhstan and Uzbekistan. Together, the three supply around 40% of America's commercial nuclear fuel.



PHOTO: ISTOCK/GETTY IMAGES

Making matters worse, America's only plant capable of preparing natural uranium for enrichment was idled last year. All uranium mined in the U.S. must now leave the country for processing in places like France and Canada. Then it is reimported for use in

domestic nuclear power plants.

The federal government has made the situation worse. Since the 1990s, the Energy Department has maintained a stockpile of uranium from decommissioned nuclear weapons. For the past decade, the agency has actually bartered uranium away in exchange for services from contractors. The contractors then sell the uranium.

If the department sold its uranium directly, the funds would go to the U.S. Treasury, not to the agency's coffers. This bartering scheme effectively circumvents Congress's power of the purse, which is why the Government Accountability Office called it illegal in 2006 and 2011. The department kept doing it anyway.

This is happening while the U.S. is producing uranium at the lowest levels since the early 1950s. None of that matters to Washington. Each year since 2011, Energy has bartered away more uranium than the U.S. has produced.

In the past two years, the department has given contractors more than double the amount of uranium that America generates. Even though U.S. producers suffer harm from this racket, they don't have standing to challenge the government in court. The result is that American uranium producers now supply less than 5% of American nuclear fuel, and the number of American uranium workers was cut in half between 2011 and 2016.

Last spring Energy Secretary Rick Perry took a good first step when he announced that his department would begin to reduce uranium bartering with contractors. But the Energy Department should immediately stop paying its contractors in uranium. If the Trump administration ends this ill-advised policy, it will open up significant opportunities for American uranium producers to supply America's nuclear power plants.

The administration should also take action against state-owned and state-subsidized producers in Russia, Kazakhstan and Uzbekistan. These nations are unfairly flooding the U.S. with cheap uranium, as they are interested in gaining political leverage over the U.S. Two American uranium producers recently petitioned the Commerce Department to investigate these abuses. The Trump administration should expedite this investigation and take steps to make sure our uranium producers can compete on a level playing field.

At a minimum, the administration should pursue policies that promote robust American uranium production. America is on the cusp of losing its ability to produce its own nuclear fuel. The administration can't let that happen.

Mr. Barrasso, a Wyoming Republican, is chairman of the Senate Environment and Public Works Committee.

Appeared in the February 8, 2018, print edition.

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U.S. SENATE COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
(/public/index.cfm/home)

PRESS RELEASES (/PUBLIC/INDEX.CFM/PRESS-RELEASES-REPUBLICAN)

Barrasso Supports Investigation into Russia, Kazakhstan, and Uzbekistan's Unfair Uranium Trade Practices (/public/index.cfm/press-releases-republican?ID=BADEBABB-0759-4A26-8948-486D8BF117FE)

January 17, 2018

WASHINGTON, D.C. — Today, U.S. Senator John Barrasso (R-WY), chairman of the Senate Committee on Environment and Public Works (EPW) released the following statement on the announcement that multiple uranium producers have jointly filed a petition with the U.S. Commerce Department to investigate the effects of uranium imports on U.S. national security.

"For years, government-owned uranium producers in Russia, Kazakhstan, and Uzbekistan have unfairly flooded American markets with cheap uranium," said Barrasso. "As a result, uranium production in the United States has fallen to the lowest levels we have seen since the early 1950s.

"America's ability to produce uranium is crucial to power our economy and keep our nation safe. It's not only an energy security issue, it is a national security issue. The Trump administration needs to expedite this investigation and take action to preserve this vital industry."

Background Information:

On January 16, 2018, American uranium producers Energy Fuels and Ur-Energy jointly submitted a [petition \(http://www.energyfuels.com/wp-content/uploads/2018/01/2017.01.16-Signed-Petition.pdf\)](http://www.energyfuels.com/wp-content/uploads/2018/01/2017.01.16-Signed-Petition.pdf) for relief, under section 232 of the Trade Expansion Act of 1962, to the U.S. Commerce Department to investigate the effects of uranium imports, from foreign state-owned firms, on America's national security.

Imports of uranium from state-owned and state-subsidized organizations in Russia, Kazakhstan, and Uzbekistan now meet nearly 40 percent of U.S. demand, while American production fulfills less than 5 percent. America's nuclear power plants are now dependent on foreign sources for about 90 percent of their nuclear fuel needs. In 2017, uranium production in the United States fell significantly.

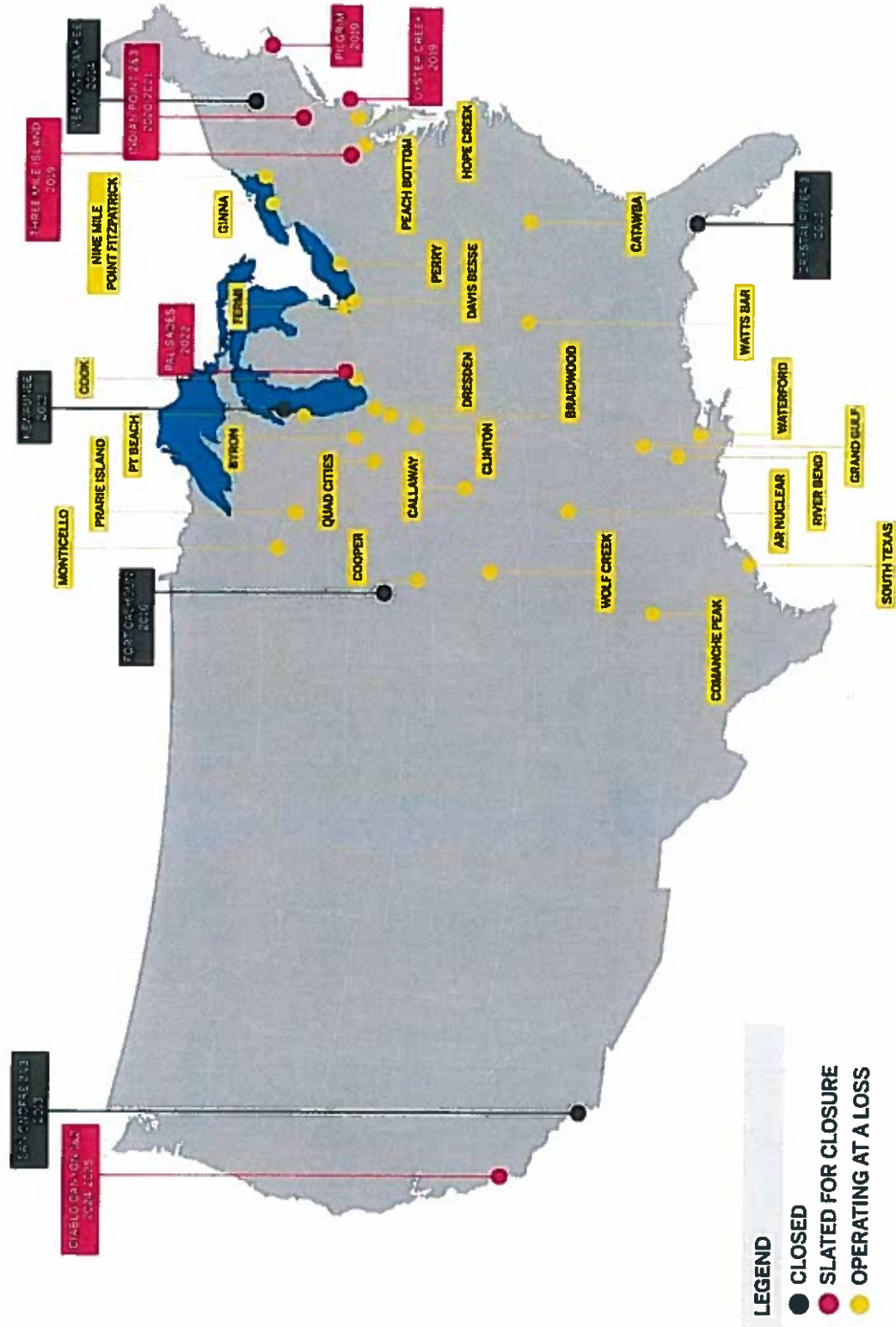
The Senate EPW Committee oversees the Nuclear Regulatory Commission, the nation's principal regulator of uranium producers and nuclear power plants.

Wyoming is home to more than half of all uranium production in the United States.

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Permalink: <https://www.epw.senate.gov/public/index.cfm/2018/1/barrasso-supports-investigation-into-russia-kazakhstan-and-uzbekistan-s-unfair-uranium-trade-practices> (<https://www.epw.senate.gov/public/index.cfm/2018/1/barrasso-supports-investigation-into-russia-kazakhstan-and-uzbekistan-s-unfair-uranium-trade-practices>)

U.S. NUCLEAR PLANT CLOSURES & CHALLENGED PLANTS



Source: "Half of U.S. Nuclear Power Plants are Underwater," Bloomberg New Energy Finance, June 2017

ANNOUNCED PREMATURE NUCLEAR PLANT SHUTDOWNS

11,062 TOTAL MW



LEGEND

MEGAWATTS

LATEST ELECTRICITY GENERATED

agricultural sector including sulfur, salt, phosphate, and gypsum. The manufacture of products such as glass, ceramics, refractories, and abrasives require quartz, soda ash, feldspar, kaolin, ball clays, mullite and kyanite, industrial diamonds, garnets, corundum, and borates. Many others could be listed.

Finally, it should be noted that mineral criticality is not static, but rather changes over time. This analysis represents a snapshot in time that should be reviewed and updated periodically using the most recently available data in order to accurately capture rapidly evolving technological developments and the consequent material demands.

Table 1: List of critical minerals

Mineral commodity	Sectors					Top Producer	Top Supplier	Notable example application
	Aerospace (non-defense)	Defense	Energy	Telecommunications & electronics	Transportation (non-aerospace)			
Aluminum						China	Canada	Aircraft, power transmission lines, lightweight alloys
Antimony						China	China	Lead-acid batteries
Arsenic						China	China	Microwave communications (gallium arsenide)
Barite						China	China	Oil and gas drilling fluid
Beryllium						United States	Kazakhstan	Satellite communications, beryllium metal for aerospace
Bismuth						China	China	Pharmaceuticals, lead-free solders
Cesium and rubidium						Canada	Canada	Medical applications, global positioning satellites, night-vision devices
Chromium						South Africa	South Africa	Jet engines (superalloys), stainless steels
Cobalt						Congo (Kinshasa)	Norway	Jet engines (superalloys), rechargeable batteries
Fluorspar						China	Mexico	Aluminum and steel production, uranium processing
Gallium						China	China	Radar, light-emitting diodes (LEDs), cellular phones
Germanium						China	China	Infrared devices, fiber optics
Graphite (natural)						China	China	Rechargeable batteries, body armor
Helium						United States	Qatar	Cryogenic (magnetic resonance imaging (MRI))
Indium						China	Canada	Flat-panel displays (indium-tin-oxide), specialty alloys
Lithium						Australia	Chile	Rechargeable batteries, aluminum-lithium alloys for aerospace
Magnesium						China	China	Incendiary countermeasures for aerospace
Manganese						China	South Africa	Aluminum and steel production, lightweight alloys
Niobium						Brazil	Brazil	High-strength steel for defense and infrastructure
Platinum group metals ⁴						South Africa	South Africa	Catalysts, superalloys for jet engines
Potash						Canada	Canada	Agricultural fertilizer
Rare earth elements ⁵						China	China	Aerospace guidance, lasers, fiber optics
Rhenium						Chile	Chile	Jet engines (superalloys), catalysts
Scandium						China	China	Lightweight alloys, fuel cells
Strontium						Spain	Mexico	Aluminum alloys, permanent magnets, flares
Tantalum						Rwanda	China	Capacitors in cellular phones, jet engines (superalloys)
Tellurium						China	Canada	Infrared devices (night-vision), solar cells
Tin						China	Peru	Solder, flat-panel displays (indium-tin-oxide)
Titanium						China	South Africa	Jet engines (superalloys) and airframes (titanium alloys), armor
Tungsten						China	China	Cutting and drilling tools, catalysts, jet engines (superalloys)
Uranium						Kazakhstan	Canada	Nuclear applications, medical applications
Vanadium						China	South Africa	Jet engines (superalloys) and airframes (titanium alloys), high-strength steel
Zirconium and hafnium						Australia	China	Thermal barrier coating in jet engines, nuclear applications

⁴ This category includes platinum, palladium, rhodium, ruthenium, iridium, and osmium

⁵ This category includes yttrium and the lanthanides

Table 2. Important technologies / applications by mineral commodity and industrial sector.

Mineral commodity	Aerospace	Defense	Energy	Telecommunications & electronics	Transportation	Other
Aluminum	<ul style="list-style-type: none"> airframes fuselage 	<ul style="list-style-type: none"> aerospace naval vessels ground vehicles 	<ul style="list-style-type: none"> power transmission lines lightweight alloys land based turbines (superalloys, coating) aluminum oxide catalyst supports 		<ul style="list-style-type: none"> marine vessels ground vehicles lightweight alloys 	<ul style="list-style-type: none"> infrastructure packaging aluminum oxide refractories
Antimony		<ul style="list-style-type: none"> lead-acid batteries infrared devices (night vision) 	<ul style="list-style-type: none"> lead-acid batteries 	<ul style="list-style-type: none"> semiconductors 	<ul style="list-style-type: none"> lead-acid batteries 	<ul style="list-style-type: none"> flame-retardant materials glass and ceramics manufacturing plastics manufacturing
Arsenic		<ul style="list-style-type: none"> semiconductors 	<ul style="list-style-type: none"> solar cells 	<ul style="list-style-type: none"> cellular phones 		<ul style="list-style-type: none"> gallium arsenide integrated circuits optoelectronic devices
Barite			<ul style="list-style-type: none"> oil and gas drilling fluid 			<ul style="list-style-type: none"> radiation shielding medical applications
Beryllium	<ul style="list-style-type: none"> structural and optical components aluminum alloys 	<ul style="list-style-type: none"> guidance systems radar 	<ul style="list-style-type: none"> oil and gas drilling equipment nuclear applications 	<ul style="list-style-type: none"> undersea cable housings contacts 		<ul style="list-style-type: none"> x-ray windows
Bismuth		<ul style="list-style-type: none"> thermoelectric devices machining alloys 	<ul style="list-style-type: none"> bismuth oxide SOFC applications 	<ul style="list-style-type: none"> solder semiconductor manufacturing 		<ul style="list-style-type: none"> pharmaceutical glass and ceramics manufacturing metallurgical applications
Cesium and rubidium	<ul style="list-style-type: none"> global positioning satellites guidance systems 	<ul style="list-style-type: none"> infrared devices (night vision) 	<ul style="list-style-type: none"> fuel cells solar cells 	<ul style="list-style-type: none"> cellular phones motion sensor devices fiber optics photoelectric cells 		<ul style="list-style-type: none"> medical applications scintillation atomic clocks specialty glass
Chromium	<ul style="list-style-type: none"> jet engines (superalloys) 	<ul style="list-style-type: none"> superalloys specialty steels 	<ul style="list-style-type: none"> land-based turbines SOFC applications 			<ul style="list-style-type: none"> stainless steel specialty steels corrosion resistance
Cobalt	<ul style="list-style-type: none"> jet engines (superalloys) rechargeable batteries 	<ul style="list-style-type: none"> superalloys permanent magnets rechargeable batteries 	<ul style="list-style-type: none"> rechargeable batteries petroleum catalysts land-based turbines superalloys SOFC catalysts high temperature boiler tubing 	<ul style="list-style-type: none"> rechargeable batteries 	<ul style="list-style-type: none"> rechargeable batteries 	<ul style="list-style-type: none"> cemented carbides specialty steels

Critical Mineral List

USGS TECHNICAL INPUT DOCUMENT
IN RESPONSE TO SECRETARIAL ORDER NO. 3359

2/2/2018

Mineral commodity	Aerospace	Defense	Energy	Telecommunications & electronics	Transportation	Other
Fluorspar			<ul style="list-style-type: none"> uranium processing 	<ul style="list-style-type: none"> semiconductor manufacturing 		<ul style="list-style-type: none"> hydrofluoric acid steelmaking aluminum production metallurgical applications fluorochemicals
Gallium	<ul style="list-style-type: none"> solar cells in satellites microwave power transistors 	<ul style="list-style-type: none"> radar radio frequency amplifiers infrared imaging 	<ul style="list-style-type: none"> solar cells light-emitting diodes 	<ul style="list-style-type: none"> cellular phones light-emitting diodes integrated circuits 		<ul style="list-style-type: none"> optoelectronic devices lasers photodetectors
Germanium	<ul style="list-style-type: none"> solar cells in satellites 	<ul style="list-style-type: none"> infrared devices (night-vision) guidance systems 	<ul style="list-style-type: none"> solar cells 	<ul style="list-style-type: none"> fiber optics integrated circuits 		<ul style="list-style-type: none"> optoelectronic devices polymer manufacturing
Graphite	<ul style="list-style-type: none"> rechargeable batteries jet engine components 	<ul style="list-style-type: none"> munitions rechargeable batteries body armor superalloy components 	<ul style="list-style-type: none"> rechargeable batteries nuclear applications PEM fuel cell applications land based turbines 	<ul style="list-style-type: none"> rechargeable batteries 	<ul style="list-style-type: none"> rechargeable batteries 	<ul style="list-style-type: none"> lubricant refractories electrodes steelmaking
Helium				<ul style="list-style-type: none"> semiconductor manufacturing 		<ul style="list-style-type: none"> magnetic resonance imaging cryogenic cooling shielding gas tank purging leak detection
Indium	<ul style="list-style-type: none"> Aircraft wind shield 	<ul style="list-style-type: none"> infrared imaging 	<ul style="list-style-type: none"> solar cells alkaline batteries nuclear applications light-emitting diodes 	<ul style="list-style-type: none"> fiber optics flat-panel displays light-emitting diodes semiconductors thermal interface materials 		<ul style="list-style-type: none"> lasers solder
Lithium	<ul style="list-style-type: none"> rechargeable batteries aluminum alloys (structural) 	<ul style="list-style-type: none"> rechargeable batteries aerospace alloys nuclear weapons stockpile tritium production support 	<ul style="list-style-type: none"> rechargeable batteries cooling water chemistry in nuclear power reactors 	<ul style="list-style-type: none"> rechargeable batteries 	<ul style="list-style-type: none"> rechargeable batteries 	<ul style="list-style-type: none"> glass and ceramics manufacturing lubricant medical applications
Magnesium	<ul style="list-style-type: none"> aluminum alloys 	<ul style="list-style-type: none"> incendiaries munitions aluminum alloys radar 	<ul style="list-style-type: none"> lightweight alloys 		<ul style="list-style-type: none"> automobile components 	<ul style="list-style-type: none"> metallurgical applications corrosion resistance
Manganese	<ul style="list-style-type: none"> jet engines (superalloys) aluminum alloys 	<ul style="list-style-type: none"> aluminum alloys 	<ul style="list-style-type: none"> land-based turbines lightweight alloys rechargeable batteries 		<ul style="list-style-type: none"> aluminum alloys 	<ul style="list-style-type: none"> specialty steel

Critical Mineral List

USGS TECHNICAL INPUT DOCUMENT
IN RESPONSE TO SECRETARIAL ORDER NO. 3359

2/2/2018

Mineral commodity	Aerospace	Defense	Energy	Telecommunications & electronics	Transportation	Other
Niobium	• jet engines (superalloys)	• jet engines (superalloys) • specialty steels	• land-based turbines • oil and gas pipelines (specialty steel) • SOFC catalysts nickel based superalloys			• superconducting alloys
Platinum-group metals	• jet engines (casting, coatings)		• petroleum catalysts • land-based turbines • fuel cells • autocatalysts	• hard-disk drives • capacitors • flat-panel displays	• autocatalysts • fuel cells • automotive components	• chemical catalysts • medical applications • refractory crucibles • metallurgical applications • integrated circuits
Potash			• oil and gas drilling fluid			• agricultural fertilizer
Rare earth elements	• jet engines (ceramics, superalloys)	• guidance systems • lasers • radar • sonar	• petroleum catalysts • permanent magnets for electric motor and wind turbines • fuel additives • wind turbines • nuclear applications • rechargeable batteries • SOFC applications • turbines (superalloys, coating)	• fiber optics • signal amplifiers • cellular phones • flat-panel displays • hard-disk drives • lighting • electric motors • sensors	• autocatalysts • electric motor magnets • automotive glass	• steel and nonferrous alloys • chemical catalysts • ceramics • permanent magnets • polishing compounds • lasers • optical glass • medical imaging • x-ray scintillometers
Rhenium	• jet engines (superalloys)		• petroleum catalysts • land-based turbines	• high-temperature applications		• refractory crucibles
Scandium	• aluminum-scandium alloys	• aluminum alloys • lasers	• fuel cells • lighting • petroleum refining	• lasers • lighting • phosphors • piezoelectrics	• fuel cells	• catalysts • ceramics • flares and pyrotechnics
Strontium	• aluminum alloys • superalloys	• flares, tracer ammunition	• oil and gas drilling • permanent magnets	• permanent magnets • semiconductors	• permanent magnets • aluminum alloys	• ceramics • metal refining • flares and pyrotechnics
Tantalum	• jet engines (superalloys)	• armor-piercing munitions • aircraft components	• land-based turbines	• capacitors • cellular phones • semiconductors • flat-panel displays		• cemented carbides • chemical processing equipment • corrosion resistance • medical devices
Tellurium		• infrared devices (night-vision) • temperature control systems	• solar cells	• photoreceptor devices • semiconductors		• specialty steels • nonferrous alloys • thermoelectric applications
Tin		• nonferrous alloys (bearings)		• solder • flat-panel displays		• solder • packaging • polymer manufacturing • catalysts • glass manufacturing

Critical Mineral List

USGS TECHNICAL INPUT DOCUMENT
IN RESPONSE TO SECRETARIAL ORDER NO. 3359

2/2/2018

Mineral commodity	Aerospace	Defense	Energy	Telecommunications & electronics	Transportation	Other
Titanium	<ul style="list-style-type: none"> jet engines (superalloys) airframes 	<ul style="list-style-type: none"> aerospace ground vehicle armor artillery corrosion resistance 	<ul style="list-style-type: none"> oil and gas drilling equipment corrosion resistance land based turbines 			<ul style="list-style-type: none"> medical devices photocatalysts
Tungsten	<ul style="list-style-type: none"> jet engines (superalloys) 	<ul style="list-style-type: none"> armor-piercing munitions 	<ul style="list-style-type: none"> oil and gas drilling equipment land-based turbines petroleum catalysts 	<ul style="list-style-type: none"> cellular phones contacts filaments lighting 		<ul style="list-style-type: none"> cemented carbides specialty steels chemical catalysts corrosion resistance
Uranium	<ul style="list-style-type: none"> space missions 	<ul style="list-style-type: none"> nuclear applications support for tritium production naval propulsion 	<ul style="list-style-type: none"> electricity production, including supporting manufacturing 			<ul style="list-style-type: none"> medical isotope production and development
Vanadium	<ul style="list-style-type: none"> jet engines (superalloys) titanium alloys 	<ul style="list-style-type: none"> specialty steel titanium alloys land based turbines 	<ul style="list-style-type: none"> petroleum catalysts grid scale batteries 			<ul style="list-style-type: none"> chemical catalysts specialty steel titanium alloys
Zirconium and hafnium	<ul style="list-style-type: none"> jet engines (ceramics, superalloys) 	<ul style="list-style-type: none"> incendiaries 	<ul style="list-style-type: none"> nuclear applications SOFC applications land based turbines (coating) 			<ul style="list-style-type: none"> corrosion resistance technical ceramics chemical catalysts

Appendix I. Criticality methodology and other considerations**NSTC Critical Mineral Screening Methodology:**

The NSTC Critical Mineral Screening Methodology applies a country-agnostic view when screening 77 non-fuel mineral commodities. The methodology is comprised of two stages, starting with an indicator-based approach that then informs deep-dive studies conducted in the second stage. The three fundamental indicators used in the first stage are: Supply Risk (*R*); Production Growth (*G*); and Market Dynamics (*M*). Each indicator aims to capture a different yet complementary aspect of criticality: *R* attempts to capture the risk associated with the concentration of production in countries with low governance, *G* evaluates the growth of world production to highlight a commodity's growing importance, and *M* examines price volatility to capture the stability of the commodity's market. The outputs provided by each indicator are normalized on a common scale from 0 to 1, with higher values indicating a relatively higher degree of criticality. This gives each indicator an equal weight before being combined into a criticality potential score (*C*) via a geometric mean. Each indicator is applied consistently to every screened commodity on an annual basis. Data are primarily sourced from the USGS. The minerals identified in the first stage as having a statistically significant high *C* score then undergo "deep-dive" studies in the second stage designed to closely evaluate circumstances specific to each commodity.

Production Concentration:

The mining and processing of many non-fuel mineral commodities has increasingly become concentrated in only a few nations, for example Chinese refining of cobalt. This trend reflects changes in global demand for materials, comparative advantages in production (aluminum production from low-cost energy in U.A.E.), or government policies to secure domestic supplies of strategic materials (beryllium in the U.S.), whereas historic production concentrations have typically reflected geological distributions (platinum-group metals in South Africa). Highly concentrated production is an important component of criticality for geologically derived materials. Mineral production that is concentrated in a small number of countries poses a higher risk of triggering a supply disruption than a mineral with widely dispersed production. Highly consolidated supply chains have an increased risk of supply disruption from foreign government action, trade disputes, civil unrest, natural disasters, and other hazards. Production concentration was quantified using a metric of market concentration known as the Herfindahl–Hirschman Index (HHI), which is calculated as the sum of the squares of each producing nation's global production share of a commodity in a given year. HHI is used by the Department of Justice and the Federal Trade Commission to identify highly concentrated markets where firms exhibit elevated control above an established threshold of 2,500 on a scale that ranges from 0-10,000. Similarly, a threshold of 2,500 was used to identify commodities with highly concentrated production and the largest producer of each mineral commodity is indicated.

U.S. Net Import Reliance:

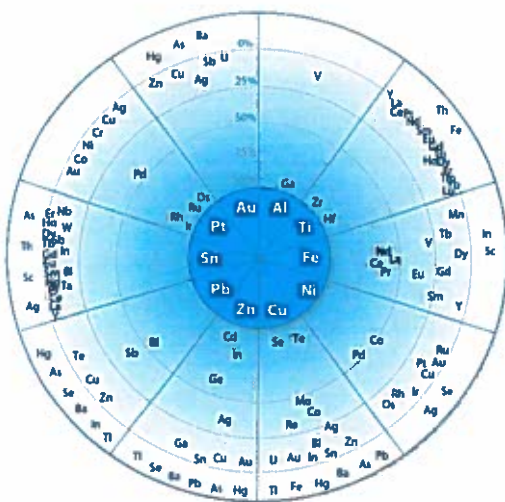
The United States relies on imports of many mineral commodities because domestic production is either lacking or insufficient to satisfy domestic demand by consumers. As a metric of this foreign dependency, net import reliance (NIR) is calculated as the amount of imported material (including changes in stockpiles) minus exports and changes in government and industry stocks and is expressed as a percentage of domestic consumption (see U.S. Geological Survey Mineral Commodity Summaries 2017). For example, a mineral commodity that is not produced in the United States has an NIR of 100%. When U.S. production of a mineral commodity exceeds domestic consumption, the United States is a net exporter. For this analysis, materials that require imports to satisfy more than half of domestic consumption are deemed to have a high U.S. NIR. The largest foreign suppliers of these targeted mineral commodities have been included in addition to the NIR to provide broader strategic context, which highlights that not only does the U.S. require foreign supplies, but that 12 out of the 26 commodities with high U.S. NIR are primarily sourced from China. However, high net import reliance should not be

construed to always pose a potential supply risk. For example, three of the commodities deemed critical or near critical are primarily imported from Canada, a nation with a Department of Defense Manufacturing and Industrial Base Policy memorandum of understanding that prioritizes reciprocal supply of goods during peace and war time scenarios.

Byproduct commodities:

Many commodities are not directly mined, but are instead recovered during the processing, smelting, or refining of a host material and are therefore deemed “byproducts.” These byproducts are typically chemically similar to their host material and are found in the same ores, albeit at a small fraction of the concentration, for example tellurium in copper ores. Byproducts are almost never independently economically viable to mine, relying on the economics of the host material’s mining, which may then yield an economically recoverable concentration of the byproduct in slag, ash, flue gasses, or other “waste” streams. The recovery of these byproducts is typically low compared to the total amount of material that was made available from mining, with recovery facility capacity posing a greater restriction on supply than geologic availability. Twelve of the thirty commodities deemed here as critical or near-critical are byproducts, including helium which is recovered from oil and gas extraction. Therefore, strategies to increase the domestic supply of these commodities should also consider the mining and processing of the host materials, as enhanced recovery of byproducts alone may be insufficient to meet U.S. consumption.

Figure 1: Illustration of the relationship between by-products and host materials. The principal host metals form the inner circle. Byproduct elements appear in the outer circle at distances proportional to the percentage of their primary production (from 100 to 0%) that originates with the host metal indicated. From Nassar *et. al.* Science Advances, 2015



Cited references

U.S. Geological Survey, 2017, Mineral commodity summaries 2017: U.S. Geological Survey, 202 p., <http://dx.doi.org/10.3133/70180197>

Nassar, N.T., Graedel, T.E., and Harper, E.M., 2015, By-product metals are technologically essential but have problematic supply: *Science Advances*, v. 1, no. 3, p. e1400180.

Appendix II: Brief Commodity Summaries - Critical Minerals

Mineral commodity	Summary
Aluminum	The U.S. has historically had a low import reliance on aluminum metal, although this has been changing in recent years due to the loss of domestic smelting capacity. Moreover, production of aluminum has increasingly become concentrated in China in recent years. The larger concern for aluminum is, however, the bauxite ore, on which the U.S. is highly-import reliant, which is used to produce alumina, the feed stock for primary aluminum smelters. Bauxite is imported from tropical regions, dominantly Jamaica, as well as Brazil, Guinea, and Guyana. Alumina imports from Australia and Brazil are important sources for specific aluminum smelters, although these imports are generally offset by alumina exports.
Antimony	Antimony is not mined domestically. The U.S. produces primary antimony metal and oxide from imported feedstocks and secondary (recycled) antimony from antimonial lead recovered from spent lead-acid batteries. Alloys of antimony and lead provide enhanced electrical properties to batteries. In addition to its use in antimonial lead for lead-acid batteries, other major uses are flame retardants, lead alloys, as a catalyst for plastics, PVC stabilizers, ceramics and glass, as well as ammunition.
Arsenic	Despite an abundance of domestic resources, primary arsenic metal has not been produced in the United States in decades. Arsenic is mostly used as arsenic trioxide for the generation of chromated copper arsenide for pressure treating lumber. However, arsenic, as a metal, also has uses as a hardener for lead alloys and in gallium arsenide semiconductors. Primary arsenic has not been produced in the U.S. in decades. The U.S. is thus entirely reliant on imports, largely from China and Morocco. Currently arsenic is not recovered from end-of-life electronics. New scrap, however, is recycled by manufacturers.
Barite	Barite is overwhelmingly used in the oil and gas industry as a high density component of drilling mud, and consumption mirrors the activity of the petroleum industry. The U.S. is highly import reliant on barite imports, largely from China, and additional concerns address the supply of high-specific-gravity material required by the petroleum industry. Recent exploration of domestic barite resources has been limited, although significant resources have been identified.
Beryllium	The United States produces approximately 85% of global beryllium mine production from one deposit in Utah, with the remainder produced in China and other countries. Only three countries process beryllium ores into beryllium products: China, Kazakhstan, and the United States. The majority of beryllium is used to make beryllium-copper and other alloys, whereas 20% of consumption is in the form of beryllium metal, composites, and oxides. Beryllium alloys are used widely in telecommunications, electrical components, and electronics, and many other products. Beryllium metal is used mainly in defense, aerospace, and nuclear applications. The Defense Logistics Agency maintains an inventory of beryllium metal in the National Defense Stockpile. The only domestic beryllium metal processing facility was constructed under Title III of the Defense Production act and began operation in 2012.

Mineral commodity	Summary
Bismuth	Aside from small quantities of bismuth recycled from old and new scrap, all bismuth consumption in the U.S. is imported, mainly from China, which is the world's largest producer. Bismuth is contained in some of the lead ores mined domestically, but all lead concentrate lead are exported for smelting since the closure of the last primary lead smelter in 2013. Bismuth finds major application in chemicals for cosmetic, industrial, laboratory, and pharmaceutical uses. Bismuth also is used in a number of metallurgical applications, including use as a nontoxic replacement for lead. Bismuth can be replaced in many of its major applications.
Cesium and rubidium	The United States relies on imports for cesium and rubidium. Only a few thousand kilograms of cesium and rubidium are consumed in the United States every year. By gross weight, cesium formate brines used for high-pressure, high-temperature well drilling for oil and gas production and exploration are the primary application for cesium. Rubidium is used in specialty glass and night-vision devices. The United States sourced the majority of its pollucite, the principal cesium mineral, from the largest known deposit in North America at Bernic Lake, Manitoba, Canada; however, that operation ceased mining at the end of 2015 and continued to produce cesium products from stocks. The company indicated it had sufficient stocks of raw materials to continue producing its cesium products for the foreseeable future. Rubidium concentrate is produced as a byproduct of pollucite (cesium) and lepidolite (lithium) mining and is imported from other countries for processing in the United States.
Chromium	Chromium is predominantly used in the production of stainless steel and superalloys where it adds temperature and corrosion resistance. U.S. chromite reserves are small, with no mining, resulting in chromium-bearing materials being produced from both imported chromite ores and ferrochromium. Globally, South Africa has the largest chromite reserves and is the leading source of chromium-bearing imports. Limited substitutes exist for chromium in alloy applications; however recycling is extensive, accounting for approximately 40% of consumption.
Cobalt	Congo (Kinshasa) is increasingly becoming a dominant miner of cobalt, with over one-half of world production in 2016. This production was mainly a byproduct of copper operations. Cobalt is also recovered as a byproduct of nickel in Russia and other countries. Like the United States, China lacks sufficient domestic supplies for its industries, and thus has aggressively sought to secure its supplies through overseas acquisitions. Cobalt demand is expected to grow significantly owing to its use in rechargeable batteries for electric vehicles and other technologies. Other uses of cobalt are in superalloys for jet engines and cemented carbides for cutting tools and wear-resistant applications.
Fluorspar	The U.S. is highly import reliant on foreign sources of fluorspar, chiefly Mexico, with limited domestic production. Fluorspar's uses are typically categorized into three broad categories: in the production of hydrofluoric acid (HF), in the production of aluminum fluoride (essential for aluminum smelting), uranium processing, and as a flux in steelmaking. Fluorspar is also important in the manufacture of welding rods. Through its use in the production of hydrofluoric acid, it is the main source of fluorine in almost all chemical applications. The U.S. produces fluorosilicic acid from phosphate processing, however this potential domestic fluorine source has not been widely adopted for acid generation and metallurgical uses.

Mineral commodity	Summary
Gallium	Gallium is primarily recovered as a byproduct of processing bauxite, with smaller quantities recovered from zinc processing residues. No primary gallium has been recovered in the U.S. since 1987. Current production of low-grade, unrefined gallium is dominated by China. However, the U.S. can and does refine gallium to high-grade from primary low-grade gallium imports and from new scrap (recycled materials). Gallium finds major application in integrated circuits and optoelectronic devices such as light emitting diodes (LEDs), photodetectors, and solar cells.
Germanium	Germanium is a minor constituent of some lead and zinc ores mined in the United States. The U.S. lacks processing facilities for recovering germanium from primary ores. Zinc concentrates containing germanium are exported to Canada and Belgium for processing and germanium recovery. The U.S. is reliant on imports of processed material or end products. Currently, China is by far the world's largest germanium producer. Germanium is used in fiber optics, infrared optics, electronics, and solar cells.
Graphite (natural)	China is by far largest producer of natural graphite, accounting for roughly two-thirds of world production. Only 4% of the world's natural graphite comes from North America, with no U.S. production in decades. Although natural graphite was not produced in the U.S. in 2016, approximately 98 U.S. firms, primarily in the Northeastern and Great Lakes regions, consumed graphite in various forms from imported sources for use in brake linings, foundry operations, lubricants, refractory applications, and steelmaking. Graphite's use in rechargeable batteries, as well as technologies under development, such as large-scale fuel-cell applications, could consume as much graphite as all other uses combined.
Helium	Helium is extracted from natural gas produced in the United States. Crude helium production exceeds domestic consumption, making the United States a net exporter of helium. Helium is used in magnetic resonance imaging (MRI), welding, semiconductor manufacturing, analytical and laboratory applications, engineering and scientific applications, and various other uses. The Bureau of Land Management (BLM) manages the Federal Helium Program. Public law requires that the BLM to dispose of all Federal helium-related assets when the remaining helium stockpile falls below 83 million cubic meters or no later than 2021.
Indium	Indium is primarily consumed as indium tin oxide (ITO), largely in flat-panel displays. Other notable uses of indium include semiconductors and low-temperature alloys. Indium is recovered as a by-product of zinc ores. Although the U.S. has significant production of zinc ore there is no recovery of indium from ores in the U.S. The U.S. is, therefore, exclusively reliant on imports. China is the world's largest producer of indium; however, Canada is the largest source of U.S. imports. ITO new (manufacturer's) scrap is known to be recycled domestically, though there is limited information on the quantity of this production. There are no known commercial substitutes for ITO in flat-panel displays.

Mineral commodity	Summary
Lithium	Lithium can be recovered from hard-rock deposits and brines. Lithium demand is expected to grow significantly owing to its use in rechargeable batteries, particularly for electric vehicles. Lithium hydroxide is also used for cooling water chemistry control in pressurized water reactors and may be required in some advanced concept nuclear reactors (molten salt). The U.S. import reliance is moderate, but increasing foreign consumption in addition to U.S. demand growth has driven a substantial exploration boom. The National Nuclear Security Administration (NNSA) has a sufficient supply for its needs and with proper processing capabilities would not need to add to its supply in the foreseeable future.
Magnesium	Magnesium metal is produced from brines, which are virtually unlimited in comparison to demand. The U.S. only has one magnesium metal producer, which creates a potential single point of failure. Magnesium metal production is an important component of domestic titanium production; therefore, the loss of this domestic producer could result in broader impacts. The U.S. only has a moderate import reliance on magnesium metal, with Israel and North America providing over 50% of imports. There is a significant secondary recovery from magnesium castings and aluminum alloys, which is comparable to the reported primary consumption.
Manganese	The U.S. has not mined manganese in decades and is entirely reliant on imports of manganese for ferroalloys, silicomanganese, and chemical compounds, with ore and alloy imports largely coming from African nations and Australia. The U.S. does not possess economically viable resources, and recycling of manganese only occurs incidentally during steel scrap processing.
Niobium	The vast majority of the world's niobium production comes from one country, Brazil. Niobium finds major use in high-strength low-alloyed steels that are necessary for infrastructure development and superalloys in the aerospace industry. Like the United States, China has no domestic niobium primary production and has thus invested in overseas acquisitions to secure its supplies. As developing countries construct their infrastructure and developed nations, including the United States redevelop theirs, demand for niobium will likely increase.
Platinum-group metals	Platinum-group-metal (PGM) production is concentrated in South Africa and, to a lesser degree, in Russia and Zimbabwe. Although some primary PGMs are produced in the United States as well as secondary (recycled) production, these are insufficient to satisfy domestic demand. Economic conditions, labor issues, and electricity shortages in South Africa in recent years have highlighted the risk associated with high production concentration in a single country. PGMs are used in a wide variety of applications ranging from electronics to anticancer drugs and biomedical devices to glass manufacturing equipment but are especially widely used as catalysts. Use in catalytic converters for the reduction of harmful emissions from internal combustion engines is essential but are likely to decrease with increased use of electric vehicles. Given their high value, PGMs have relatively high recycling rates except in their use in electronic applications owing to the lack of collection of post-consumer electronics. Substitution of PGMs is limited, with PGMs often being the best substitutes for other PGMs.

Mineral commodity	Summary
Potash	Potash denotes a variety of mined and manufactured salts, which contain the element potassium in water-soluble form. Potash is used extensively in agriculture, with fertilizers accounting for over 85% of use and the chemical industry accounting for the remainder. The United States is 90% reliant on imports to meet domestic demand for potash, with 85% of potash imports originating in Canada. Potash is produced in New Mexico and Utah from underground mining of ores and processing of brines. Estimated domestic potash resources total about 7 billion tons, whereas domestic reserves are estimated to be about 520 million tons. No substitutes exist for potassium as an essential plant nutrient and as an essential nutritional requirement for animals and humans.
Rare earth elements	With the closure of the Mountain Pass Mine in California, rare earth elements (REEs) are not mined in the United States. The vast majority of REEs, especially heavy REEs, are mined and processed in China. REEs are used in a wide range of applications ranging from magnets to phosphors for which there are limited substitutes. Furthermore, little post-consumer recycling occurs for most of the REEs. Efforts undertaken by the Critical Materials Institute to develop substitutes and enhance recycling technologies are ongoing.
Rhenium	Rhenium is primarily used as an alloying agent in high-temperature steels for jet engines. Rhenium is produced as a byproduct of molybdenum, which itself is often a byproduct of porphyry copper mining. Although rhenium occurs in domestic molybdenum-copper resources, the United States has insufficient processing capacity to meet domestic demand for rhenium. The U.S. ships rhenium-bearing molybdenum concentrates to Chile for recovery and imports refined rhenium. Rhenium recycling plays an important role in its global supply, but demand for new commercial and military jet aircraft will likely make it impossible for recycling alone to be sufficient. Given its high value and small market, substitution of rhenium is evaluated continually, with some substitutes having achieved commercial success. Reduced rhenium and rhenium-free alloys are currently being evaluated by major aerospace companies.
Scandium	Scandium-bearing minerals were neither mined nor recovered from mine tailings domestically. The principal source for scandium metal and scandium compounds is imports from China. The principal uses for scandium are in aluminum-scandium alloys and solid oxide fuel cells. Other uses for scandium included ceramics, electronics, lasers, lighting, and radioactive isotopes used as a tracing agent in oil refining.
Strontium	The U.S. is completely import reliant for strontium, sourcing all celestite from Mexico and other strontium compounds from Mexico, Germany, and China. Historically, the US did have some domestic production of strontium carbonate, but this ended in 2006. Several companies do produce downstream chemicals domestically, but in small amounts.
Tantalum	There has been no significant U.S. domestic production of tantalum since the 1959. Moreover, tantalum is the only conflict mineral (the other three being tungsten, tin, and gold) whose primary production is mostly in the Great Lakes region of Africa, namely in Rwanda, Congo (Kinshasa), and, to a lesser extent, Burundi. Large, conventional tantalum mines in developed countries, including Australia and Canada, have largely been placed on care-and-maintenance indefinitely owing to competition from lower-cost artisanal operations in Africa. Tantalum has a number of important uses in electronics, mainly in capacitors, and in superalloys that are used in jet engines and gas turbines.

Mineral commodity	Summary
Tellurium	Tellurium is mainly recovered as byproduct of anode slimes from certain copper refineries. Most of the tellurium contained in the copper anode slimes is currently not recovered. Tellurium production in the U.S. and globally could thus be increased substantially without increasing copper production, but only under the appropriate economic conditions. Tellurium demand may increase significantly if the solar photovoltaic technology that uses tellurium, namely cadmium telluride (CdTe), gains market-share. There are, however, a number of competing solar photovoltaic technologies. Aside from solar cells, tellurium's other major uses include thermoelectric devices and thermal imaging devices. Tellurium is also used in metallurgical applications.
Tin	Tin has a wide variety of end uses, including containers, chemicals, non-ferrous alloys, and solders. U.S. mineral reserves of tin are small, with neither domestic mining nor smelting occurring in over 20 years. However, tin has robust recycling from old (post-consumer) and new (manufacturing) scrap in the U.S. The U.S. relies entirely on foreign imports of primary smelted tin; however, these imports are broadly distributed between South America and Southeast Asia. China is the world's largest miner of tin, with over one-third of world production.
Titanium	The U.S. is highly import reliant on titanium mineral concentrates, which have a variety of uses including pigments but are also required for metal production. The U.S. has a moderate import reliance on titanium metal (sponge); importing mostly scrap and raw metal, while exporting finished wrought products. Titanium mineral reserves exist in the southeastern U.S.; however, these reserves are small compared to foreign supplies. Titanium recycling makes up a significant portion of domestic consumption, and few acceptable substitutes exist. Titanium is critical in aerospace components, in rotating parts in turbine engines, and for its use in corrosive environments.
Tungsten	Tungsten was produced domestically from imported materials or recovered from waste and scrap. China possesses the world's largest tungsten reserves and is also the largest producer with over 80% of the world's primary production. China also supplies nearly 40% of U.S. imported tungsten material. Tungsten materials are widely recycled, which decreases foreign reliance. Substitutes for tungsten in high-wear and high-density applications exist and could reduce tungsten consumption, albeit at both increased price and performance loss.
Uranium	Uranium is critical for U.S. defense needs, energy production, the development of medical isotopes and for space energy. Current DOE inventory is meeting most defense needs in the short term. However U.S. sourced uranium will be needed in the future to meet defense requirements that, according to international agreements, must be free from peaceful use restrictions. Uranium is also critical in ensuring a reliable supply of fuel for the 99 nuclear power reactors that supply about 20% of U.S. electricity. Only 8 percent of uranium loaded into U.S. nuclear power reactors in 2016 was of U.S. origin; the remaining 92 percent was foreign-origin uranium. Under the American Isotope American Medical Isotope Production Act of 2012 the U.S. Department of Energy carries out a program of assistance for the development of fuels, targets, and processes for domestic molybdenum-99 medical isotope production. Uranium is also needed for production of fuel for certain space missions.

Mineral commodity	Summary
Vanadium	Vanadium production is largely concentrated in a small number of foreign producers, including China (with over one-half of world production), South Africa, Russia, and, increasingly, Brazil. The U.S. import reliance of vanadium is high, largely for consumption in alloy steel production, however, significant domestic resources exist, although there is no primary production.
Zirconium and hafnium	Zircon is recovered as a coproduct of mining and processing titanium and zirconium mineral concentrates in Florida and Georgia. In addition to domestic sources of zircon, the United States imports zircon mineral concentrates, mainly from South Africa, zirconium metal from China, as well as zirconium chemicals. Zirconium metal and hafnium metal are produced in Oregon and Utah from zirconium chemical intermediates. Typically, zirconium and hafnium are contained in zircon at a ratio of about 50 to 1, respectively. The leading consumers of zirconium metal are the nuclear energy and chemical process industries, whereas hafnium metal is used in superalloys for jet engines and land-based turbines.

Notes:

- Commodities are listed alphabetically.
- Supply chain considerations were utilized in the selection process, meaning a commodity is included if any step in its supply chain is deemed problematic.

Brad Botwin

From:
Sent:
To:

Cc:
Subject:

(b) (6)

+ Brad and Erika – FYI.

(b) (6)

FYI

From: Brown, David C:(BSC) <davidc.brown@exeloncorp.com>

(b) (6)

Thanks very much!

(b) (6)

Hello David. Thanks for your message. I will ask Farah to follow up with you on a time that works for biith of us either Thursday or Friday.

Very best,

Ed

From: Brown, David C:(BSC) <davidc.brown@exeloncorp.com>

Date: Monday, Feb 05, 2018, 9:15 PM

(b) (6)

Subject: Meeting Request

Hi Ed,

I know that you all are busy with budget prep work but I wanted to see if you might have some time this week for a quick meeting on a pending petition at the Department of Commerce regarding uranium imports.

Our analysis indicates that the petition could lead to an increase in nuclear fuel costs of as much as \$600 million. This would have enormous adverse impact on efforts to preserve the nation's nuclear fleet.

As you know, an analysis by Bloomberg New Energy Finance showed that half the nation's existing plants are losing money. An additional cost of \$600 million a year would inevitably drive additional premature retirements at a time when the Administration has made the preservation of these plants a primary objective of the nation's energy policy.

Thanks very much for your consideration.

David

David C. Brown

Senior Vice President, Federal Government Affairs & Public Policy



(b) (6)

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Brad Botwin

From: (b) (6)
Sent: Monday, February 05, 2018 2:45 PM
To: Brad Botwin
Subject: RE: Question on Sect 232

Hi Brad,

Per our brief phone conversation, I'm contacting you to get some background information concerning the recent joint petition filed by Energy Fuels Resources and Ur-Energy on uranium imports. By way of a brief introduction, I work for Edlow International Co (EIC). EIC manages the transport of radioactive materials for clients world-wide. My questions are as follows:


1. What is the status in DOC regarding this petition? Has DOC made a decision on whether to initiate an investigation on this matter and if so, when was the decision made? If not, when is DOC expected to make a decision on whether or not to initiate an investigation?
2. Does DOC respond to petitioners on decision to conduct an investigation? Is this response/decision publicly announced/available?
3. Assuming a decision is made to start an investigation, what is the timetable for the investigation?
4. Are there any impacts to uranium imports while an investigation is underway?
5. Any other relevant information concerning this petition?

Thank you in advance for your reply and please feel free to contact me.

Best regards,
Gary

Gary DeLeon
Director, Government Services
office: +1 (202) 482-4959

(b) (6)

 **EDLOW INTERNATIONAL COMPANY**
1666 Connecticut Ave., N.W. Suite 201
Washington, D.C. 20009

(b) (6)

Gary,
Sounds good. I'll do so.
You can contact Brad Botwin, from our Bureau of Industry and Security regarding your question about Section 232. His number is 202-482-4060.

Best regards,

Danius

Danius Barzdukas
Japan Desk Officer
International Trade Administration
Department of Commerce
202-482-1147

(b) (6)
From: [REDACTED]
Sent: Monday, February 05, 2018 10:35 AM
To: Danius Barzdukas <Danius.Barzdukas@trade.gov>
Subject: RE: Question on Sect 232

Hi Danius,

I'm doing good. Thanks for your assistance. If you find yourself near Dupont Circle sometime, let me know and maybe we can have lunch.

Best regards,
Gary

Gary DeLeon
Director, Government Services
office: +1 (202) 483-4959
mobile: +1 (202) 830-7494

(b) (6)

 **EDLOW INTERNATIONAL COMPANY**
1666 Connecticut Ave., N.W. Suite 201
Washington, D.C. 20009

From: Danius Barzdukas [<mailto:Danius.Barzdukas@trade.gov>]
Sent: Monday, February 5, 2018 10:22 AM
To: Gary DeLeon <gdeleon@edlow.com>
Subject: RE: Question on Sect 232

Hi Gary,
How are you. I am not the right person for this. I will try to find someone for you.
Thanks and best regards,
Danius

Danius Barzdukas
Japan Desk Officer
International Trade Administration
Department of Commerce
202-482-1147

From: Gary DeLeon [<mailto:gdeleon@edlow.com>]
Sent: Monday, February 05, 2018 10:19 AM
To: Danius Barzdukas <Danius.Barzdukas@trade.gov>
Subject: Question on Sect 232

Hi Danius,

Hope this e-mail finds you well.

I would like to get some background on a potential Section 232 investigation regarding the recent petition on uranium exports. Are you the person to speak with on this or can you point me to the right direction? Would like to chat for a few minutes today if possible.

Best regards,
Gary

Gary DeLeon

Director, Government Services

office: +1 (202) 483-4959

mobile: +1 (202) 830-7494

(b) (6)

 **EDLOW INTERNATIONAL COMPANY**
1666 Connecticut Ave., N.W. Suite 201
Washington, D.C. 20009

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Executive Summary

Uranium is a key element of U.S. national security. It is the source of our nuclear deterrent and powers the commercial reactors that produce 20% of the electricity for the U.S. electric grid. U.S.-sourced uranium is essential for national security:

- Fissionable material in U.S. nuclear weapons
- Tritium that boosts U.S. nuclear warheads
- Fuel to power U.S. Navy submarines and surface ships
- Nuclear power plants that are essential for a reliable power grid

Today we face a serious crisis because the domestic industry that produces this key ingredient for the nation's defense and critical infrastructure is threatened by imports from state-sponsored producers in Russia, Kazakhstan, Uzbekistan, and China. With no free market constraints, producers in these countries are destroying our uranium mining industry. They have already seized the majority of the U.S. market, and the few remaining U.S. miners now supply less than five percent of our domestic uranium needs.

Foreign State-Owned Companies Have Targeted the U.S.

As U.S. producers have closed mines and laid off workers, nations who do not share our democratic values and are not open markets have expanded their production facilities and strengthened their commercial positions. State actors from Russia, Kazakhstan, Uzbekistan, and China are targeting the U.S. market, throwing U.S. miners out of work, and jeopardizing the domestic nuclear fuel cycle, including the jobs of other U.S. workers throughout the fuel cycle. This is not a matter of foreign competition legitimately underpricing domestic producers. It is foreign, state-mandated production undermining U.S. companies that have the ability to compete on a level playing field.

Adding to the gravity of the miners' situation is the fact that the entire U.S. nuclear industry is in crisis. The sole uranium conversion facility in the U.S. has been struggling financially and recently announced it will idle production, lay off employees, and terminate contractors. Our

leading supplier of reactor technology is in bankruptcy. The nation no longer has any domestic capability to enrich uranium for defense purposes, and its aging nuclear stockpile needs renewal. Although the uranium mining industry is not the only part of the U.S. nuclear fuel cycle being unfairly challenged, it is the part that has been most directly targeted by foreign state actors. Unless the government acts promptly, these state-sponsored foreign companies will succeed in their objective of destroying any future for U.S. uranium mining operations.

The Threat Comes from Russia, Kazakhstan, and China

The U.S. uranium industry needs immediate relief from imports that have grown dramatically and captured almost 80% of annual U.S. uranium demand. Our country cannot afford to depend on foreign sources – particularly Russia, and those in its sphere of influence, and China – for the element that provides the backbone of our nuclear deterrent, powers the ships and submarines of America's nuclear Navy, and supplies 20% of the nation's electricity. The Department of Commerce and the President must act decisively to restore the long-term viability of the nation's uranium mines and related infrastructure. Otherwise, our commercial and military nuclear capabilities will be further diminished, and our country will become dependent on foreign governments that compete with the U.S. for geopolitical influence and commercial advantage.

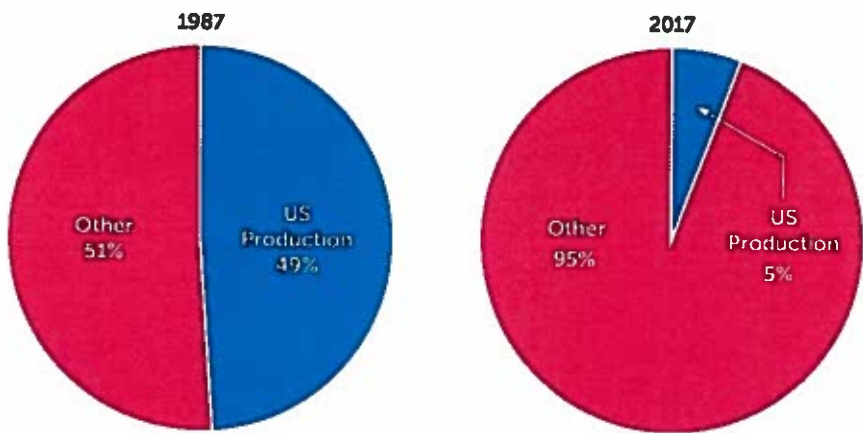
The domestic uranium mining industry needs U.S. government assistance to survive the foreign onslaught – particularly from Russia and Kazakhstan – that has undermined the U.S. uranium industry while new players – particularly China – will soon make the situation worse. The Russian nuclear industry and its relationship with Kazakh and Uzbek uranium producers is driven by Russian geopolitical goals and is part of a broader effort to expand Russian influence around the globe. Such state-sponsored actions against the U.S. industry require a comparable response by our government. That is the precise reason Congress enacted Section 232 of the Trade Expansion Act of 1962 -- to protect essential national security industries whose survival is threatened by imports.

The two Petitioners – Energy Fuels and Ur-Energy – are the primary domestic producers still operating mines, and in 2017, they produced more than half of all the uranium mined in the

U.S. However, their capacity utilization has shrunk to 9% and 13.5% respectively, they face increasing financial pressure, and during the last two years, they have laid off more than 50% of their workforce. Their current situation reflects years of industry decline, while imports have risen dramatically.

The uranium industry in crisis: 30 years of decline

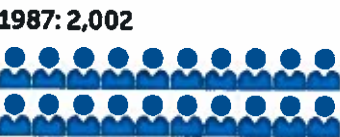
Shares of national requirements



Domestic industry participants:



Domestic industry employees:



Confronted with a persistently low spot-price and an oversupplied market, Petitioners have been relying on existing higher priced long-term contracts to survive. However, those contracts are coming to an end and cannot be replaced at a reasonable level of pricing in the current market.

State-supported producers in the Russian sphere of influence have led the assault that has caused this damage to the U.S. industry:

- Almost 40% of uranium delivered in the U.S. in 2016 and 2017 came from Russia, Kazakhstan, and Uzbekistan
- Kazakh imports have benefited from an 87% devaluation of the national currency in comparison to the U.S. dollar
- Uranium producers in these countries are state-owned and continue to produce at uneconomic levels despite a global uranium surplus

As difficult as the situation has been in recent years, U.S. uranium miners will face additional threats in the next few years because of Russia and China:

- The Russian industry has announced it intends to increase its share of the U.S. market when the Suspension Agreement between Russia and the U.S.¹ expires in less than three years
- China is in the process of becoming a major new supplier, investing in mines in Kazakhstan, Namibia, and elsewhere

Thus, today's bad economic situation is likely to become worse as both Russia and China target the U.S. market for additional sales at the same time that major commercial players (including Cameco, which is the largest producer that is not state-owned) have been forced to reduce production and close efficient mines because of low prices and reduced demand.

¹ The Suspension Agreement currently restricts Russian uranium imports and settled an antidumping dispute between the U.S. and Russia in which the Department found that Russian uranium imports were unfairly priced by a margin of over 100%.



The relief requested in this Petition is essential to stop the erosion of our nuclear national security and stem the tide of decline that threatens the entire U.S. nuclear industry.

U.S. Defense Needs Require U.S. Uranium

For each of the three primary defense requirements, U.S.-sourced uranium is essential because international treaties preclude the use of foreign uranium for defense purposes. First, the warheads in U.S. nuclear weapons are required by law and treaty to be manufactured from uranium produced from U.S. mines. Second, the tritium that is an essential component of such weapons is required to be produced in a U.S. reactor utilizing domestic uranium as a fuel source. Third, the uranium that is highly-enriched and fabricated into fuel for the nuclear Navy must be of U.S. origin; in fact, there is a direct correlation between the commercial nuclear and nuclear Navy supply chains. If the U.S. mining industry ceases to exist, the country will lose the ability to supply these essential national security requirements from domestic sources. *In the history of Section 232, no investigation has ever been more clearly linked to national security than this proceeding.*

Critical Infrastructure Requires a Secure Supply of Uranium

In addition to the direct threat that an absence of U.S.-mined uranium would pose to the nation's defense capabilities, there are significant negative implications for the security of the electrical grid, which relies on nuclear energy to produce 20% of the nation's electricity (and nearly 60% of the nation's carbon-free electricity). Until recently, the 99 commercial nuclear reactors in the U.S. have relied heavily on U.S.-mined uranium. There have been past concerns about the

U.S. becoming too reliant on imports; indeed, in 1989 a Section 232 investigation of uranium imports was triggered because the share of imported uranium exceeded 37.5%. That 1989 investigation confirmed that domestic sources of uranium are vital to national security. Today, however, the import penetration is much higher, over twice the 1989 figure, at the direct expense of U.S. domestic producers. There is, moreover, a significant difference between imported uranium supplying a majority of U.S. reactor needs and having no domestic mining source at all. Unfortunately, unless this Petition is successful, that is the endpoint toward which the country is headed.

Foreign Nationalistic Interests Increase the National Security Threat

Dependency on imported uranium is dangerous in the abstract but even more troublesome because the growth in U.S. dependency has been accompanied by an increase in the share of the U.S. market supplied by state-sponsored producers in countries with a nationalistic agenda – Russia, Kazakhstan, and Uzbekistan. Given that Rosatom, the state-owned nuclear entity of the Russian state, has effective control or strong influence over the nuclear infrastructure in all three countries, dependency on imported uranium means reliance on uranium over which Russia has either direct control or significant influence. As evidenced by its cutoff of the supply of natural gas to the Ukraine in 2009 and 2014, Russia is willing to use its control of energy resources as an economic and political weapon. This sort of geopolitical risk should be unacceptable to U.S. nuclear utilities and their rate payers, who currently depend heavily on Russia and nations under Russia's influence to fuel their reactors. Indeed, it is conceivable to envision a supply disruption from those nations triggered by sanctions or other geopolitical developments. If the U.S. uranium mining industry does not receive the relief it seeks in this Petition, that risk will increase, increasing the vulnerability of the U.S. commercial power infrastructure.

Both National Security and Nonproliferation Goals Are Threatened

The loss of our domestic uranium mining industry, combined with our current uranium dependency on Russia and countries within its sphere of influence, would have severe national security implications, both for our military capabilities and for the nation's critical infrastructure.

This vulnerability is more profound because the military and commercial nuclear structures are interwoven and heavily dependent on each other -- a weakness in one sector weakens the other. This is a crisis of the first order and needs to be addressed in a pragmatic and effective manner that provides the mining industry immediate relief to ensure its survival, and long-term support so that it can fully recover and play its essential role in support of the country's national security interests.

It also deserves emphasis that a weakened U.S. nuclear fuel cycle and supply chain diminishes the ability of the U.S. to serve as an effective voice for nuclear nonproliferation. Without a robust domestic industry, it is not possible for the U.S. to continue to play a leadership role in shaping the development of nuclear energy in emerging nuclear states. If the U.S. is no longer a leading source of nuclear goods and technology, it will lose the ability to insist that nuclear energy be developed responsibly and to minimize the potential for further proliferation of nuclear weapons. The loss of the U.S. uranium mining industry because of excessive imports from Russia, Kazakhstan, and Uzbekistan plays into the hands of countries that do not share U.S. goals and democratic values.

The Proposed Relief Is Both Essential and Reasonable

Petitioners are proposing a form of relief designed to halt the decline of the industry and enhance its long-term viability. There are two components of this relief: (1) a quota that would reserve a limited portion of the U.S. market (25%) for U.S. uranium and (2) a Buy America policy for U.S. government agencies that utilize uranium. By implementing a flexible quota based on historical import shares, the U.S. can reserve a portion of its market for U.S. producers to compete and provide the essential domestic sourced uranium that U.S. national security requires. The quota proposal in this Petition takes account of existing business relationships between U.S. utilities and their foreign suppliers, while setting reasonable limits on the amount of imported uranium so that U.S. producers have sufficient commercial opportunities to survive.

In addition, Petitioners propose that the federal government adopt a Buy American policy for federal agencies that is consistent with current government policy and requires the federal government to purchase domestic uranium for its own needs. This second component of the

proposed relief is important because in recent years the government has contributed to the economic problems of U.S. miners by selling part of the government stockpile of uranium to raise money for the remediation of Department of Energy facilities. The Buy American component of the proposed remedy will help offset the financial harm to the U.S. mining industry that such government sales have caused.

The proposed form of relief considers the interests of all affected parties, while serving the broader national interest. It limits the potential for foreign parties to circumvent by recognizing the interrelationships between the different parts of the nuclear fuel cycle and the many different forms in which uranium is imported. The portion of the market that would effectively be reserved for U.S. uranium miners reflects the current capabilities of the U.S. industry to produce and the level of domestic production required to sustain the domestic industry. As we demonstrate later in this Petition, the potential financial impact of this proposal on U.S. consumers is negligible and a reasonable price to pay to ensure the survival of an industry that is essential for U.S. national security.

This Petition seeks protection against overwhelming imports in order to preserve and revitalize what remains of an imperiled uranium mining industry. To those who would suggest that this action is poorly timed or at odds with recently announced reductions in international production, it should be made clear: those announced reductions are, in fact, critical to restore a healthy international uranium market but are otherwise irrelevant to the national security threats posed by the current state of our U.S. uranium industry. This Petition neither overreaches nor seeks relief that would harm the international uranium markets. It does not, for example, propose to subsidize the domestic industry in order to permit significant exports of uranium into the international market. The simple objective of this Petition is to obtain relief from the excessive levels of imports that threaten our national security by destroying the domestic uranium mining industry.



August 1, 2018

BY E-MAIL AND FEDERAL EXPRESS

Mr. Michael Vaccaro, Acting Director
Office of Technology Evaluation
Bureau of Industry and Security
U.S. Department of Commerce
1401 Constitution Avenue, NW, Room 1093
Washington, DC 20230

Re: Opposition to Request for Extension of the Public Comment Period in Section 232
National Security Investigation of Imports of Uranium (Docket Number BIS-2018-0011)

Dear Mr. Vaccaro:

On July 31, 2018, the Nuclear Energy Institute ("NEI") requested an extension of the public comment period in this docket from September 10 until October 10, 2018. Energy Fuels Resources (USA) Inc. and Ur-Energy USA Inc. (collectively, "Petitioners") hereby request that the Department of Commerce ("the Department") deny NEI's request, which is unnecessary and likely to cause further delay in providing the U.S. uranium mining industry with the relief it requires.

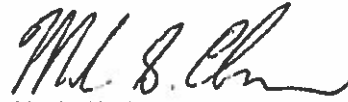
The Petitioners submitted their Petition for Relief pursuant to Section 232 of the Trade Expansion Act of 1962 ("the Act") on January 16, 2018, requesting that the Department investigate the effects of uranium imports on national security. Despite the Act's requirement that an investigation be initiated "immediately" upon receipt of a petition, there was a six-month delay in getting the investigation underway, and any further delay will result in additional harm to the domestic uranium mining industry. The need for the relief sought in the Petition was already imperative in January. In the months since the Petition was filed, the U.S. industry has continued to lose ground, and the industry can ill-afford the further delay that would result if NEI's request is granted.

NEI contends that the scope of the investigation has been expanded beyond uranium mining, but in this regard it only cites a Department of Commerce press release that states the investigation "will canvass the entire uranium sector." In fact, the language of a press release does not determine the scope of the investigation. The Federal Register notice that announced initiation of the investigation (see 83 Fed. Reg. 35204, July 25, 2018) is the governing document, and, in accordance with the Petition, it states simply that the Secretary of Commerce has initiated an investigation "to determine the effects on the national security of imports of uranium." Accordingly, there is no record basis on which to conclude that the investigation extends beyond the initial scope requested by Petitioners, and NEI's sole argument in favor of an extension of time therefore fails.

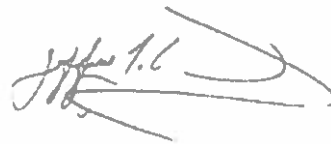
The Petition has been public since it was filed with the Department over six months ago, and all interested parties have had ample time to review the Petition and related material. Considering the significant amount of time that has already passed since the filing of the Petition on January 16, the 45-day comment period established by the Department is more than adequate to allow NEI and any members of the nuclear industry to provide comments. Moreover, the Petitioners, who are themselves NEI members, do not concede that NEI speaks for the nuclear industry with respect to the

Section 232 investigation. Petitioners respectfully request that the NEI request for an extension be denied and the deadline for comments remain as set forth in the July 25 Federal Register notice.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "M. S. Chalmers", written in a cursive style.

Mark Chalmers
*President and Chief Executive Officer of Energy
Fuels Resources (USA) Inc.*

A handwritten signature in dark ink, appearing to read "Jeff Klenda", written in a cursive style with a large flourish at the end.

Jeff Klenda
*Chairman, Chief Executive Officer, and Founder
of Ur-Energy USA Inc.*

cc: Mr. Brad Botwin, Director, Industrial Studies

Brad Botwin

From: Brad Botwin
Sent: Wednesday, June 27, 2018 10:00 PM
To: Chewning, Eric D SES (US); Karvonides, Nicholas CIV (US)
Subject: Fwd: Uranium Section 232 Investigation
Attachments: 2018.06.27 - Letter to Secretary Ross - CEO Meeting.pdf

FYI. Brad

This Message was sent from my Mobile Device.

Begin Forwarded Message:

From: "Herlach, Mark" <markherlach@eversheds-sutherland.com>
Subject: Uranium Section 232 Investigation
Date: 27 June 2018 14:07
To: "Wilbur Ross" <WLRoss@doc.gov>
Cc: "Michael Vaccaro" <Michael.Vaccaro@bis.doc.gov>, "Brad Botwin" <Brad.Botwin@bis.doc.gov>, "Mark Chalmers" <mchalmers@energyfuels.com>, "Jeff Klenda" <jeff.klenda@UR-Energy.com>

Dear Secretary Ross,

On behalf of our clients, Energy Fuels Resources (USA) Inc. and Ur-Energy USA Inc., the attached letter requests an opportunity to meet with you in person to discuss the urgency of initiating the investigation of imports of uranium products that threaten national security, as requested in the pending Section 232 Petition. Our clients would appreciate your prompt consideration of this request.

Kind regards.

Mark Herlach

Mark Herlach | Partner

Eversheds Sutherland (US) LLP
700 Sixth Street, NW, Suite 700, Washington, DC 20001-3980, US
T: +1.202.383.0172

markherlach@eversheds-sutherland.com | www.eversheds-sutherland.com

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June 27, 2018

BY FEDERAL EXPRESS AND E-MAIL

The Honorable Wilbur Ross
Secretary of Commerce
U.S. Department of Commerce
1401 Constitution Ave., NW
Washington, DC 20230

Re: Uranium Investigation Under Section 232 of the Trade Expansion Act of 1962

Dear Secretary Ross:

On Wednesday, June 20, 2018, in response to a question posed by Senator Michael Enzi (R-WY) during the Senate Committee on Finance Hearing "Current and Proposed Tariff Actions Administered by the Department of Commerce," you indicated that the Department intends to make a decision "very shortly" as to whether the Department will initiate an investigation of uranium imports. However, as Petitioners indicated in their June 8 letter to you, the language of Section 232 of the Trade Expansion Act of 1962 (19 U.S.C. § 1862) requires that "upon application of an interested party ... the Secretary of Commerce ... shall immediately initiate an appropriate investigation to determine the effects on the national security of imports of the article which is the subject of such ... application."

Mark Chalmers, President and Chief Executive Officer of Energy Fuels Resources (USA) Inc. ("Energy Fuels") and Jeff Klenda, Chairman, Chief Executive Officer, and Founder of Ur-Energy USA Inc. ("Ur-Energy") would like to request a time to meet with you at your earliest convenience to discuss the continued decline of the domestic uranium industry and the urgency of initiating the uranium investigation requested by the Petitioners, as the law requires. It has been nearly six months since Energy Fuels and Ur-Energy submitted a Petition for Relief Under Section 232, and, despite the statutory requirement for an "immediate" investigation upon the filing of a petition by an interested party, the Department has not yet begun the investigation.

Please let us know as soon as possible a date and time when it would be convenient to meet in Washington to discuss these important issues.

Respectfully submitted,



Mark D. Herlach
Allison E. Speaker

Counsel for Petitioners

cc: Mr. Michael Vaccaro, Director, Office of Strategic Industries & Economic Security
Mr. Brad Botwin, Director, Industrial Studies

Brad Botwin

From: Brad Botwin
Sent: Wednesday, June 27, 2018 4:12 PM
To: EComstock@doc.gov; 'Teague, Anne (Federal)'
Subject: FW: Uranium Section 232 Investigation
Attachments: 2018.06.27 - Letter to Secretary Ross - CEO Meeting.pdf

From: Herlach, Mark [mailto:markherlach@eversheds-sutherland.com]
Sent: Wednesday, June 27, 2018 2:06 PM
To: Wilbur Ross <WLRoss@doc.gov>
Cc: Michael Vaccaro <Michael.Vaccaro@bis.doc.gov>; Brad Botwin <Brad.Botwin@bis.doc.gov>; Mark Chalmers <mchalmers@energyfuels.com>; Jeff Klenda <jeff.klenda@UR-Energy.com>
Subject: Uranium Section 232 Investigation

Dear Secretary Ross,

On behalf of our clients, Energy Fuels Resources (USA) Inc. and Ur-Energy USA Inc., the attached letter requests an opportunity to meet with you in person to discuss the urgency of initiating the investigation of imports of uranium products that threaten national security, as requested in the pending Section 232 Petition. Our clients would appreciate your prompt consideration of this request.

Kind regards.

Mark Herlach

Mark Herlach | Partner

Eversheds Sutherland (US) LLP
700 Sixth Street, NW, Suite 700, Washington, DC 20001-3980, US
T: +1.202.383.0172

markherlach@eversheds-sutherland.com | www.eversheds-sutherland.com

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Brad Botwin

Subject: Meeting w/Ad Hoc Utilities Group/

Subject: Meeting w/Ad Hoc Utilities Group/
Location: 3073

Start: Thu 2/8/2018 11:00 AM
End: Thu 2/8/2018 12:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Petrina Chase

Required Attendees: Richard Ashooh; Matthew Borman; Gerard Horner; Brad Botwin; Erika Maynard; Mark Crawford; nancy.fischer@pillsburylaw.com

Subject matter: Section 232 Uranium Petition

From: Fischer, Nancy A. [mailto:nancy.fischer@pillsburylaw.com]

Sent: Friday, January 26, 2018 10:46 AM

To: Richard Ashooh

Cc: Matthew Borman

Subject: Section 232 Uranium Petition - Request for Meeting by Ad Hoc Utilities Group

Dear Assistant Secretary Ashooh,

I represent the Ad Hoc Utilities Group (AHUG). This group represents two-thirds of the major utilities providing nuclear power across the United States and includes the following members:

Exelon Generation Company, LLC, Ameren Missouri, Dominion Energy Services, Inc. on behalf of Virginia Electric and Power Company and Dominion Energy Nuclear Connecticut, Inc., Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, Florida Power & Light Company, NextEra Energy Resources, PSEG Nuclear LLC, South Carolina Electric & Gas Company, Southern Nuclear Operating Company, Inc., and Xcel Energy Services Inc.

On behalf of this group, I write regarding the January 16 Section 232 petition filed by two foreign-owned mining companies, UR-Energy USA and Energy Fuels Resources (USA), Inc., requesting that the Commerce Department initiate an investigation to determine whether imports of uranium threatens to impair US national security. The utilities have strong concerns about the petitioners' assertions and proposed remedies, which would in fact harm US national security, including the utilities' security and diversity of supply.

Prior to any decision by BIS regarding initiation of an investigation, we would like the opportunity to meet with you and your staff. A number of AHUG representatives would attend as well. Please let us know at your earliest convenience if this would be possible, and particularly if you would be available during the week of February 5.

I look forward to hearing from you.

Sincerely,

Nancy Fischer

Counsel to Ad Hoc Utilities Group



Meeting w/Ad
Hoc Utilities Gro...

Brad Botwin

Subject: Mtg w/ John Cash, VP of Regulatory Affairs, of UR-Energy & Paul Goranson, EVP of ISR Operations for Energy Fuels

Subject: Mtg w/ John Cash, VP of Regulatory Affairs, of UR-Energy & Paul Goranson, EVP of ISR Operations for Energy Fuels

Location: Secretary's Office

Start: Mon 3/12/2018 4:00 PM

End: Mon 3/12/2018 4:30 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Schedule, Secretary's

(b) (6)

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(b) (6)

A large black rectangular redaction box covering a significant portion of the page.

Mr. Rankin,

Thank you for taking my call today. I am reaching out on behalf of EPW Chairman Barrasso in order to help facilitate a meeting with Secretary Ross and representatives of the uranium industry to discuss a Section 232 petition that was filed on January 16th, 2018. It is my understanding that UR-Energy CEO, Mr. Jeff Klenda, recently reached out to request a meeting at Secretary Ross' earliest convenience. I believe that representatives from Energy Fuels Resources Inc. have made similar requests.

Given what's at stake for the future of the U.S. uranium industry with this petition, Chairman Barrasso would greatly appreciate any assistance you can provide in helping to facilitate a meeting between the two U.S. uranium producers and Secretary Ross.

I am told that Mr. Klenda has already passed along his contact information to the scheduling office but if you need any additional information from me or if you have any questions at all, please don't hesitate to let me know. Here is additional contact information for both companies:

(b) (6)

You can reach me at any time via email or a (b) (6)

I thank you and Secretary Ross for your time and consideration of this request.

Regards,
Brad

(b) (6)

[Sign up for Senator Barrasso's newsletter](#)



Mtg w/ John
Cash, VP of Reg...

Brad Botwin

From: Speaker, Allison <allisonspeaker@eversheds-sutherland.com>
Sent: Friday, April 27, 2018 1:16 PM
To: Brad Botwin
Cc: Erika Maynard; Herlach, Mark
Subject: RE: Uranium materials
Attachments: Mark Chalmers and Jeff Klenda Op Ed.pdf; Tom Duesterberg.pdf

Hi, Brad – apologies for the issues with the links. The articles are attached.

Thanks,
Allison

Allison Speaker | Associate | T: (b) (6)

From: Speaker, Allison [<mailto:allisonspeaker@eversheds-sutherland.com>]
Sent: Friday, April 27, 2018 12:30 PM
To: Brad Botwin <Brad.Botwin@bis.doc.gov>; Erika Maynard <Erika.Maynard@bis.doc.gov>
Cc: Herlach, Mark <markherlach@eversheds-sutherland.com>
Subject: RE: Uranium materials

Hi, Brad and Erika –

I think there may be an issue with the links below, so I am providing them again in case they did not work.

<https://www.washingtonexaminer.com/opinion/op-eds/weve-entered-a-new-nuclear-cold-war-with-russia>

<https://www.forbes.com/sites/thomasduesterberg/2018/04/26/the-right-industry-for-a-section-232-review/#2d203b556c83>

Thanks,
Allison

Allison Speaker | Associate | T: +1.202.383.0530

From: Speaker, Allison
Sent: Friday, April 27, 2018 12:12 PM
To: 'Brad Botwin' <Brad.Botwin@bis.doc.gov>; 'Erika.Maynard@bis.doc.gov' <Erika.Maynard@bis.doc.gov>
Cc: Herlach, Mark <MarkHerlach@eversheds-sutherland.us>
Subject: Uranium materials

Hi, Brad and Erika –

We just wanted to pass along a letter and a few recent articles discussing the Petition that we thought may be of interest. Attached is a letter from the Wyoming Mining Association in support of the investigation. Below is a link to an op-ed written by Mark Chalmers and Jeff Klenda as well as a link to an article written by Tom Duesterberg in support of the Petition.

Mark Chalmers and Jeff Klenda Op-Ed: <https://www.washingtonexaminer.com/opinion/op-eds/weve-entered-a-new-nuclear-cold-war-with-russia>

Tom Dueterberg Article: <https://www.forbes.com/sites/thomasdueterberg/2018/04/26/the-right-industry-for-a-section-232-review/#466516436c83>

Please let us know if you have any questions or need anything additional.

Thanks,
Allison

Allison Speaker | Associate | Eversheds Sutherland (US) LLP

(b) (6)

[Biography](#) | [vCard](#)

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Brad Botwin

From: Welling, Craig <Craig.Welling@nuclear.energy.gov>
Sent: Monday, March 12, 2018 6:01 PM
To: Brad Botwin; Herman, Cheryl; Welling, Craig
Subject: FW: Uranium 232 Petition

Brad,
Could you help us on this by confirming the message and any other information we should have before arranging a call?
Thank you,
Craig

From: Paul Goranson <pgoranson@energyfuels.com>
Date: Monday, Mar 12, 2018, 5:34 PM
To: McGinnis, Edward <Edward.McGinnis@Nuclear.Energy.Gov>
Cc: Welling, Craig <Craig.Welling@nuclear.energy.gov>, Herman, Cheryl <Cheryl.Moss_Herman@nuclear.energy.gov>
Subject: Uranium 232 Petition

Ed,

UR Energy and Energy Fuels met with Secretary Ross this afternoon. In that meeting, inventories and future needs came up. He suggested that we meet with you folks and NNSA as soon as possible. We are in DC through Thursday. Do you have time for a call tomorrow?

Best regards,
Paul Goranson

(b) (6)



(b) (5)



Dear Mr. Welling,

Glad to hear from you regarding this matter. As our CEO, Mr. Jeff Klenda, and I discussed with you and Ms. Herman in May of this year, the domestic uranium mining industry is struggling to survive; due in large part to imports from state owned enterprises in Russia, Kazakhstan and Uzbekistan. We expect U.S. uranium mine production in 2017 to fall to around 1.2 million pounds U3O8. Also, the percentage of U.S. nuclear utility demand being met by U.S. miners has fallen into the single digits with no sign of recovery. Since our meeting, Ur-Energy USA Inc. and Energy Fuels Resources (USA) Inc., whose combined 2017 production will likely exceed 50% of total U.S. production, have determined that the loss of our industry is a matter of national security. It seems unwise that we continue to grow increasingly dependent on nations under the geopolitical influence of Vladimir Putin to supply fuel for 20% of our nation's electricity. Also, future defense needs for tritium, uranium for weapons and the nuclear navy must be sourced from the U.S. Therefore, along with Energy Fuels, we are contemplating developing and filing a Section 232 Petition with the Department of Commerce.

Our point of contact with the Department of Commerce is Mr. Brad Botwin who is the Director, Industrial Studies in the Office of Technology Evaluation, Bureau of Industry and Security. I have cross copied Mr. Botwin on this email and his phone number is (202) 482-4060.

We look forward to our meeting with Mr. McGinnis next week and hope others within DOE, including Secretary Perry and yourself, can attend as well. We would like to discuss the merits of a Section 232 Petition, any impact to DOE, and potential remedies.

If you need additional information, please feel free to reach out to Mr. Paul Goranson with Energy Fuels, Mr. Mark Herlach with the law firm of Eversheds Sutherland, both cross copied on this email, or myself.

Regards,

(b) (5)



John,

You are meeting with Ed McGinnis and others from the Office of Nuclear Energy on Tuesday November 14, 2017. Could you please provide us some additional background information on the trade petition?

Who is your point of contact at Commerce on this matter? We would like to ensure that Commerce is aware that you are meeting with the Office of Nuclear Energy.

Best regards,
Craig Welling

Dear Jasmine,

In order to ensure the viability of the domestic uranium mining industry and thereby protect national security, Ur-Energy USA Inc. and Energy Fuels USA Inc. are in the process of preparing a trade action that will be filed with the Department of Commerce in the coming weeks. Given the DOE's important roles in both the uranium mining industry and national security, and as a follow-up to our meeting with Secretary Perry in July, we would like to meet with senior level DOE management, including Secretary Perry if possible, to inform you of our pending action and also discuss potential remedies. We believe it is important that DOE be well appraised of our plans in advance of filing the petition. In the recent past, we have met with Suzanne Jaworowski and Ed McGinnis on uranium mining issues. We are available to meet in Washington D.C. November 15-17. If these dates won't work, please let us know and we will be glad to work with you to set a date.

We appreciate the political sensitivities surrounding the uranium industry and want to assure you that our motivation for developing a trade action, which has been under development for several months, is purely to petition our government to protect an industry that we view as critical to national security.

Regards,

(b) (5)



Brad Botwin

From: Erika Maynard
Sent: Thursday, January 18, 2018 12:49 PM
To: Alexander Lopes; Steven Clagett; Chesebro, Jonathan
Cc: Matthew Borman; Brad Botwin
Subject: 232 Uranium - Exhibits
Attachments: 2018.01.16 - Exhibits to Petition.pdf

Good Afternoon,

Please find attached the Uranium 232 exhibits.

**Thanks,
Erika**

Erika Maynard
Special Projects Manager
U.S. Department of Commerce
Bureau of Industry and Security
Office of Technology Evaluation
erika.maynard@bis.doc.gov
Phone: (202) 482-5572

Brad Botwin

From: Speaker, Allison <allisonspeaker@eversheds-sutherland.com>
Sent: Thursday, January 18, 2018 11:37 AM
To: Brad Botwin; Erika Maynard
Cc: Herlach, Mark
Subject: Agency Contacts
Attachments: Agency Contacts.pdf

Hi, Brad and Erika –

Attached is a list we have compiled of agency contacts.

Please let us know if you have any questions.

Thanks,
Allison

Allison Speaker | Associate | Eversheds Sutherland (US) LLP

T: +1.202.383.0530
[Biography](#) | [vCard](#)

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Agency Contacts

Name	Office/Agency	Contact Information
Mike Catanzaro	White House EOP	Not Available
Downey Magallanes	Department of Interior Acting Deputy Chief of Staff	Downey_magallanes@ios.doi.gov (202)-501-0654
Vincent DeVito	Department of Interior Counselor to the Secretary for Energy Policy	Vincent_devito@ios.doi.gov (202) 208-2884
Ted J. Garrish	Department of Energy Senior Advisor, Office of the Secretary	theodore.garrish@hq.doe.gov (202) 586-1145
Suzanne Jaworowski	Department of Energy Chief of Staff and Senior Advisor Office of Nuclear Energy	Suzanne.jaworowski@HQ.doe.gov (202) 586-2240
Cheryl Moss Herman	Department of Energy Office of Nuclear Energy	Cheryl.moss_herman@nuclear.energy.gov (301) 903-1788
Bill vonTill	U.S. Nuclear Regulatory Commission	(301) 415-0598
Mark Linscott	U.S. Trade Representative	mlinscott@ustr.gov 202-395-4720
Zeba Reyazuddin	U.S. Trade Representative	zreyazuddin@ustr.eop.gov 202-395-9609
Matt Edwards	Dept. of Commerce International Trade Administration	zreyazuddin@ustr.eop.gov 202-395-9609
Norbert Gannon	Department of Commerce, Manager of AD/CVD Petition Counseling	norbert.gannon@trade.gov 202-482-3605
David Richardson	Department of Commerce Senior Counsel	david.richardson@trade.gov 202-482-3155
Catherine DeFilippo	U.S. International Trade Commission	Catherine.defilippo@usitc.gov
Brad Bunning	Senate Side Legislative Assistant for Senator Barrasso of Wyoming	brad_bunning@barrasso.senate.gov
Marne Marotta	Senate Side Legislative Assistant for Senator Barrasso	marne_marotta@barrasso.senate.gov
Natalia Diez Riggin	Senate Side Legislative Assistant for Senator Enzi of Wyoming	natalia_riggin@enzi.senate.gov
Justin Memmott	Senate Side Former Counsel to Senator Barrasso, recently moved to	justin_memmott@epw.senate.gov

Name	Office/Agency	Contact Information
	the Senate Environment and Public Works Committee	
Bart Massey	Senate Side Legislative Assistant for Senator Enzi of Wyoming	bart_massey@enzi.senate.gov
Sam Love	Senate Side Legislative Assistant for Senator Gardner of Colorado	Sam_Love@gardner.senate.gov
Chuck Podolak	Senate Side Ph.D., Natural Resources policy Advisor for Senator Flake of Arizona	chuck_podolak@flake.senate.gov
Jake Bornstein	House Side Legislative Assistant for Congressman Buck of Colorado	(202) 225-4676
Holly Heussner	House Side Legislative Assistant for Congressman Cheney of Wyoming	holly.heussner@mail.house.gov
Joshua Jackson	House Side Legislative Assistant for Congressman Smith of Nebraska	josh.jackson@mail.house.gov
Patrick Malloy	House Side Legislative Assistant and Counsel for Congressman Cuellar of Texas	patrick.malloy@mail.house.gov
Dustin Sherer	House Side Legislative Assistant for Congressman Scott Tipton of Colorado	dustin.sherer@mail.house.gov
Joe Trotter	House Side Legislative Assistant for Congressman Mooney of West Virginia	Joe.Trotter@mail.house.gov
Tommy Walker	Legislative Director for Congressman DeGette of Colorado.	Tommy.Walker@mail.house.gov

Brad Botwin

From: Brad Botwin
Sent: Thursday, November 09, 2017 5:43 PM
To: Lena Richenberg; Erika Maynard
Subject: FW: Request for Meeting Re: Trade Petition

-----Original Message-----

From: John Cash [mailto:john.cash@UR-Energy.com]
Sent: Thursday, November 09, 2017 5:36 PM
To: Welling, Craig <Craig.Welling@nuclear.energy.gov>
Cc: Herman, Cheryl <Cheryl.Moss_Herman@nuclear.energy.gov>; Richards, Andrew <Andrew.Richards@Nuclear.Energy.Gov>; Benahmed, Farah (CONTR) <Farah.Benahmed@nuclear.energy.gov>; Paul Goranson <pgoranson@energyfuels.com>; Herlach, Mark <markherlach@eversheds-sutherland.com>; Brad Botwin <Brad.Botwin@bis.doc.gov>
Subject: RE: Request for Meeting Re: Trade Petition

Dear Mr. Welling,

Glad to hear from you regarding this matter. As our CEO, Mr. Jeff Klenda, and I discussed with you and Ms. Herman in May of this year, the domestic uranium mining industry is struggling to survive; due in large part to imports from state owned enterprises in Russia, Kazakhstan and Uzbekistan. We expect U.S. uranium mine production in 2017 to fall to around 1.2 million pounds U3O8. Also, the percentage of U.S. nuclear utility demand being met by U.S. miners has fallen into the single digits with no sign of recovery. Since our meeting, Ur-Energy USA Inc. and Energy Fuels Resources (USA) Inc., whose combined 2017 production will likely exceed 50% of total U.S. production, have determined that the loss of our industry is a matter of national security. It seems unwise that we continue to grow increasingly dependent on nations under the geopolitical influence of Vladimir Putin to supply fuel for 20% of our nation's electricity. Also, future defense needs for tritium, uranium for weapons and the nuclear navy must be sourced from the U.S. Therefore, along with Energy Fuels, we are contemplating developing and filing a Section 232 Petition with the Department of Commerce.

Our point of contact with the Department of Commerce is Mr. Brad Botwin who is the Director, Industrial Studies in the Office of Technology Evaluation, Bureau of Industry and Security. I have cross copied Mr. Botwin on this email and his phone number is (202) 482-4060.

We look forward to our meeting with Mr. McGinnis next week and hope others within DOE, including Secretary Perry and yourself, can attend as well. We would like to discuss the merits of a Section 232 Petition, any impact to DOE, and potential remedies.

If you need additional information, please feel free to reach out to Mr. Paul Goranson with Energy Fuels, Mr. Mark Herlach with the law firm of Eversheds Sutherland, both cross copied on this email, or myself.

Regards,

(b) (5)



(b) (5)



John,

You are meeting with Ed McGinnis and others from the Office of Nuclear Energy on Tuesday November 14, 2017.

Could you please provide us some additional background information on the trade petition?

Who is your point of contact at Commerce on this matter? We would like to ensure that Commerce is aware that you are meeting with the Office of Nuclear Energy.

Best regards,

Craig Welling

Dear Jasmine,

In order to ensure the viability of the domestic uranium mining industry and thereby protect national security, Ur-Energy USA Inc. and Energy Fuels USA Inc. are in the process of preparing a trade action that will be filed with the Department of Commerce in the coming weeks. Given the DOE's important roles in both the uranium mining industry and national security, and as a follow-up to our meeting with Secretary Perry in July, we would like to meet with senior level DOE management, including Secretary Perry if possible, to inform you of our pending action and also discuss potential remedies. We believe it is important that DOE be well appraised of our plans in advance of filing the petition. In the recent past, we have met with Suzanne Jaworowski and Ed McGinnis on uranium mining issues. We are available to meet in Washington D.C. November 15-17. If these dates won't work, please let us know and we will be glad to work with you to set a date.

We appreciate the political sensitivities surrounding the uranium industry and want to assure you that our motivation for developing a trade action, which has been under development for several months, is purely to petition our government to protect an industry that we view as critical to national security.

Regards,

(b) (5)



Grace Agyekum

Subject: Meeting w/Ad Hoc Utilities Group/

Subject: Meeting w/Ad Hoc Utilities Group/
Location: 3073

Start: Thu 2/8/2018 11:00 AM
End: Thu 2/8/2018 12:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Petrina Chase

Required Attendees: Richard Ashooh; Matthew Borman; Gerard Horner; Brad Botwin; Erika Maynard; Mark Crawford; nancy.fischer@pillsburylaw.com

Subject matter: Section 232 Uranium Petition

From: Fischer, Nancy A. [mailto:nancy.fischer@pillsburylaw.com]

Sent: Friday, January 26, 2018 10:46 AM

To: Richard Ashooh

Cc: Matthew Borman

Subject: Section 232 Uranium Petition - Request for Meeting by Ad Hoc Utilities Group

Dear Assistant Secretary Ashooh,

I represent the Ad Hoc Utilities Group (AHUG). This group represents two-thirds of the major utilities providing nuclear power across the United States and includes the following members:

Exelon Generation Company, LLC, Ameren Missouri, Dominion Energy Services, Inc. on behalf of Virginia Electric and Power Company and Dominion Energy Nuclear Connecticut, Inc., Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, Florida Power & Light Company, NextEra Energy Resources, PSEG Nuclear LLC, South Carolina Electric & Gas Company, Southern Nuclear Operating Company, Inc., and Xcel Energy Services Inc.

On behalf of this group, I write regarding the January 16 Section 232 petition filed by two foreign-owned mining companies, UR-Energy USA and Energy Fuels Resources (USA), Inc., requesting that the Commerce Department initiate an investigation to determine whether imports of uranium threatens to impair US national security. The utilities have strong concerns about the petitioners' assertions and proposed remedies, which would in fact harm US national security, including the utilities' security and diversity of supply.

Prior to any decision by BIS regarding initiation of an investigation, we would like the opportunity to meet with you and your staff. A number of AHUG representatives would attend as well. Please let us know at your earliest convenience if this would be possible, and particularly if you would be available during the week of February 5.

I look forward to hearing from you.

Sincerely,

Nancy Fischer

Counsel to Ad Hoc Utilities Group

Grace Agyekum

From: Alexander Zemek
Sent: Monday, February 12, 2018 4:07 PM
To: Matthew Borman; Gerard Horner; Brad Botwin; Richard Ashooh
Cc: BISExecSec; Petrina Chase
Subject: FW: Briefing Paper - AHUG meeting with Sec. Ross
Attachments: Mtg with US Utility Companies

I have just received notification from 5th floor ExecSec that Sec. Ross will be meeting with AHUG on Thursday (2/15/18) at 10:30 regarding Uranium 232 petition, and has requested a briefing paper. Please see attached and below note. Please prepare briefing material for U/S Ricardel's review before transmittal to Sec. Ross. The 5th floor normally wants papers 2 days before the meeting, so this will be a quick turnaround for tomorrow. I know AHUG is a group that Rich and Matt met with last week (2/8) and which was referenced in weekly report to Sec. Ross.

In connection with my prior email, I represent the Ad Hoc Utilities Group (AHUG). This group represents two-thirds of the major utilities providing nuclear power across the United States and includes the following members:

Exelon Generation Company, LLC, Ameren Missouri, Dominion Energy Services, Inc. on behalf of Virginia Electric and Power Company and Dominion Energy Nuclear Connecticut, Inc., Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, Florida Power & Light Company, NextEra Energy Resources, PSEG Nuclear LLC, South Carolina Electric & Gas Company, Southern Nuclear Operating Company, Inc., and Xcel Energy Services Inc.

On behalf of this group, I write regarding the January 16 Section 232 petition filed by two foreign-owned mining companies, UR-Energy USA and Energy Fuels Resources (USA), Inc., requesting that the Commerce Department initiate an investigation to determine whether imports of uranium threatens to impair US national security. The utilities have strong concerns about the petitioners' assertions and proposed remedies, which would in fact harm US national security, including the utilities' security and diversity of nuclear fuel supply.

Prior to any decision by Commerce Department regarding initiation of an investigation, we would like the opportunity to meet with Secretary Ross. A number of Chief Nuclear Officers and senior executives from the AHUG member companies would attend. Please let us know at your earliest convenience if this would be possible, and particularly if you would be available during the week of February 12.

I look forward to hearing from you.

Sincerely,

Nancy Fischer
Counsel to Ad Hoc Utilities Group

From: Norton, Barbara (Federal) [mailto:BNorton@doc.gov]
Sent: Monday, February 12, 2018 3:51 PM
To: Alexander Zemek <Alexander.Zemek@bis.doc.gov>
Subject: Briefing Paper

Thank you.

Barbie

Grace Agyekum

From: Alexander Lopes
Sent: Monday, February 12, 2018 2:03 PM
To: Brad Botwin
Cc: Steven Clagett; Matthew Borman; Gerard Horner
Subject: FW: Upcoming Meeting 2/15- meeting with Utility Companies

Importance: High

Brad are you aware of this meeting?

From: Devin Horne [mailto:Devin.Horne@trade.gov]
Sent: Monday, February 12, 2018 1:36 PM
To: Alexander Lopes <Alexander.Lopes@bis.doc.gov>; Steven Clagett <Steven.Clagett@bis.doc.gov>
Cc: Chesebro, Jonathan <Jonathan.Chesebro@trade.gov>; Cho, Man <Man.Cho@trade.gov>
Subject: FW: Upcoming Meeting 2/15- meeting with Utility Companies
Importance: High

Alex and Steve,

Is my understanding correct that BIS is managing the 232 uranium case? Jon and I were tasked with this briefing paper for a meeting the Secretary has taken on the topic, but I think it might be more relevant to your shop since you're evaluating the petition. Do you agree?

Best,
Devin

From: Garret Mitchell
Sent: Monday, February 12, 2018 11:21 AM
To: Devin Horne <Devin.Horne@trade.gov>; Jonathan Chesebro <Jonathan.Chesebro@trade.gov>; Man Cho <Man.Cho@trade.gov>; Adam OMalley <Adam.OMalley@trade.gov>; Victoria Gunderson <Victoria.Gunderson@trade.gov>
Cc: Valerie McNeill <Valerie.McNeill@trade.gov>; Lesley Elouaradia <Lesley.Elouaradia@trade.gov>; Lesley Cole <Lesley.Cole@trade.gov>; Rachel Krushinski <Rachel.Krushinski@trade.gov>
Subject: Upcoming Meeting 2/15- meeting with Utility Companies

Hi energy team,

The following meeting has been put on the Secretary's calendar. Info is below. We will task out momentarily.

Meeting w/ Utility Companies	External Meeting	Thursday, February 15	ITA	Tuesday, February 13
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In connection with my prior email, I represent the Ad Hoc Utilities Group (AHUG). This group represents two-thirds of the major utilities providing nuclear power across the United States and includes the following members:

Exelon Generation Company, LLC, Ameren Missouri, Dominion Energy Services, Inc. on behalf of Virginia Electric and

Power Company and Dominion Energy Nuclear Connecticut, Inc., Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, Florida Power & Light Company, NextEra Energy Resources, PSEG Nuclear LLC, South Carolina Electric & Gas Company, Southern Nuclear Operating Company, Inc., and Xcel Energy Services Inc.

On behalf of this group, I write regarding the January 16 Section 232 petition filed by two foreign-owned mining companies, UR-Energy USA and Energy Fuels Resources (USA), Inc., requesting that the Commerce Department initiate an investigation to determine whether imports of uranium threatens to impair US national security. The utilities have strong concerns about the petitioners' assertions and proposed remedies, which would in fact harm US national security, including the utilities' security and diversity of nuclear fuel supply.

Prior to any decision by Commerce Department regarding initiation of an investigation, we would like the opportunity to meet with Secretary Ross. A number of Chief Nuclear Officers and senior executives from the AHUG member companies would attend. Please let us know at your earliest convenience if this would be possible, and particularly if you would be available during the week of February 12.

I look forward to hearing from you.

Sincerely,

Nancy Fischer
Counsel to Ad Hoc Utilities Group

International Trade Specialist
Office of the Deputy Under Secretary
U.S. Department of Commerce | International Trade Administration
Phone: 202-482-5730, email: Garret.Mitchell@trade.gov

Grace Agyekum

From: Brad Botwin
Sent: Friday, January 19, 2018 9:37 AM
To: Alexander Lopes; Erika Maynard; Steven Clagett; Chesebro, Jonathan
Cc: Matthew Borman; Gerard Horner
Subject: RE: 232 Uranium - Exhibits

Way too early for us. After the Secretary decides to pull trigger or not.

From: Alexander Lopes
Sent: Friday, January 19, 2018 9:27 AM
To: Brad Botwin <Brad.Botwin@bis.doc.gov>; Erika Maynard <Erika.Maynard@bis.doc.gov>; Steven Clagett <Steven.Clagett@bis.doc.gov>; Chesebro, Jonathan <Jonathan.Chesebro@trade.gov>
Cc: Matthew Borman <Matthew.Borman@bis.doc.gov>; Gerard Horner <Gerard.Horner@bis.doc.gov>
Subject: RE: 232 Uranium - Exhibits

Sounds good Brad. It turns out I am meeting with Jonathan and others from ITA in the OC Conference room on another Civ Nuc issue today at 1:00 PM. If you are available we could add a brief discussion on this to the agenda, it would also give you an opportunity to meet the relevant ITA folks.

Alex

From: Brad Botwin
Sent: Friday, January 19, 2018 9:12 AM
To: Alexander Lopes <Alexander.Lopes@bis.doc.gov>; Erika Maynard <Erika.Maynard@bis.doc.gov>; Steven Clagett <Steven.Clagett@bis.doc.gov>; Chesebro, Jonathan <Jonathan.Chesebro@trade.gov>
Cc: Matthew Borman <Matthew.Borman@bis.doc.gov>; Gerard Horner <Gerard.Horner@bis.doc.gov>
Subject: RE: 232 Uranium - Exhibits

Alex, why don't we get together to discuss this. Since this was filed by industry rather than self-initiated by the Secretary for steel and aluminum we have to review the petition for content, etc.

For background please look at www.bis.doc.gov/232 There is a link in the site for the 232 regs which should answer many of your initial questions.

Thanks.

Brad x4060

From: Alexander Lopes
Sent: Thursday, January 18, 2018 1:21 PM
To: Erika Maynard <Erika.Maynard@bis.doc.gov>; Steven Clagett <Steven.Clagett@bis.doc.gov>; Chesebro, Jonathan <Jonathan.Chesebro@trade.gov>
Cc: Matthew Borman <Matthew.Borman@bis.doc.gov>; Brad Botwin <Brad.Botwin@bis.doc.gov>
Subject: RE: 232 Uranium - Exhibits

Brad what is the next step?

From: Erika Maynard

Sent: Thursday, January 18, 2018 12:49 PM

To: Alexander Lopes <Alexander.Lopes@bis.doc.gov>; Steven Clagett <Steven.Clagett@bis.doc.gov>; Chesebro, Jonathan <Jonathan.Chesebro@trade.gov>

Cc: Matthew Borman <Matthew.Borman@bis.doc.gov>; Brad Botwin <Brad.Botwin@bis.doc.gov>

Subject: 232 Uranium - Exhibits

Good Afternoon,

Please find attached the Uranium 232 exhibits.

Thanks,

Erika

Erika Maynard
Special Projects Manager
U.S. Department of Commerce
Bureau of Industry and Security
Office of Technology Evaluation
erika.maynard@bis.doc.gov
Phone: (202) 482-5572

Grace Agyekum

From: Carole Showers <Carole.Showers@trade.gov>
Sent: Wednesday, January 17, 2018 4:23 PM
To: Matthew Borman
Cc: Gerard Horner; Brad Botwin; Gannon, Sally
Subject: RE: The latest 232

Yes, it does. I will ask Sally Gannon of my staff to join us. Sally is the Director of the Bilateral Agreements Unit and has been the lead administrator on the uranium agreement for the past many, many years. Shall we come to your office?

-----Original Message-----

From: Matthew Borman [mailto:Matthew.Borman@bis.doc.gov]
Sent: Wednesday, January 17, 2018 4:06 PM
To: Carole Showers <Carole.Showers@trade.gov>
Cc: Gerard Horner <Gerard.Horner@bis.doc.gov>; Brad Botwin <Brad.Botwin@bis.doc.gov>
Subject: RE: The latest 232

Thanks Carole.

That would be good. Does 3 pm tomorrow work?

-----Original Message-----

From: Carole Showers [mailto:Carole.Showers@trade.gov]
Sent: Wednesday, January 17, 2018 4:03 PM
To: Matthew Borman
Subject: The latest 232

Hi Matt - I saw the article below in today's press clippings. It looks like we will be working together yet again. I wanted to make sure you were aware of E&C's work in this area. We've been administering a suspension agreement on Russian uranium imports (a quota agreement) since 1992. Please let me know if you would like to get together and discuss further. Thanks.

ANOTHER 232 INVESTIGATION ON THE HORIZON: Just when we thought things couldn't get more exciting, the U.S. uranium mining industry is asking the Commerce Department to initiate another Section 232 investigation into the national security risks of uranium imports. The request comes as the Trump administration considers what actions it could take in similar national security probes of steel and aluminum imports.

The joint petition

<<http://go.politicoemail.com/?qs=1952393f635089f65d8e7e7659106e3794df960a41d82c60c8de835be931c1a496533bf1869d185631dd68ede1b13b35>> filed late Tuesday by Ur-Energy USA Inc. and Energy Fuels Resources Inc. claims that imports of uranium from state-owned and state-subsidized companies in Russia, Kazakhstan and Uzbekistan now fulfill 40 percent of U.S. demand, compared to the less than 5 percent satisfied by U.S. production. The Denver-based companies claim that imports from China will grow in the coming years. The companies also argue the volume of imports from Russia will only grow after a decades-old agreement that restricted imports from that country in exchange for suspending anti-dumping duties expires in 2020.

"The U.S. uranium industry needs immediate relief from imports that have grown dramatically and captured almost 80% of annual U.S. uranium demand," the companies state in their petition. "Our country cannot afford to depend on foreign sources -- particularly Russia, and those in its sphere of influence, and China -- for the element that provides the backbone of our nuclear deterrent, powers the ships and submarines of America's nuclear Navy, and supplies 20% of the nation's electricity."

232 déjà vu: This isn't Commerce's first 232 investigation into uranium imports. The department's Bureau of Industry and Security issued a report <http://go.politicoemail.com/?qs=1952393f635089f6655df264f65320a6e92b9e8575f193068b71ae71eaa04d594a2788d3a6379040a7a9210b7d85f5b1> in 1989 after a request from the Department of Energy. However, the investigation concluded that imports didn't pose a risk to national security and recommended that no action be taken. The companies claim that "conditions have deteriorated dramatically" since that probe, with U.S. uranium producers supplying 6 percent of U.S. demand in 2016, down from 66 percent in 1989.

What the companies want: The two mining companies, which in 2017 produced half of the uranium mined in the United States, say the result of any action should include a quota that would reserve 25 percent of the U.S. market for domestic uranium. They're also demanding procurement policies that would require U.S. government agencies that use uranium to purchase their supply from domestic sources.

Carole Showers

Executive Director, Office of Policy

Policy & Negotiations, Enforcement & Compliance

International Trade Administration

Department of Commerce

Carole.Showers@trade.gov

(202) 482-3217

Grace Agyekum

From: Brad Botwin
Sent: Wednesday, January 17, 2018 11:22 AM
To: Matthew Borman; MASTERSON JR., JOHN; KLASON, PETER
Cc: Gerard Horner; Mira Ricardel
Subject: RE: Uranium 232

Yes looks good. Brad

-----Original Message-----

From: Matthew Borman
Sent: Wednesday, January 17, 2018 11:21 AM
To: MASTERSON JR., JOHN <JMASTERSON@doc.gov>; KLASON, PETER <PKLASON@doc.gov>
Cc: Gerard Horner <Gerard.Horner@bis.doc.gov>; Brad Botwin <Brad.Botwin@bis.doc.gov>; Mira Ricardel <Mira.Ricardel@bis.doc.gov>
Subject: RE: Uranium 232

Gerry/Brad - ok for you?

-----Original Message-----

From: MASTERSON, JOHN T (Federal) [mailto:JMASTERSON@doc.gov]
Sent: Wednesday, January 17, 2018 11:18 AM
To: Matthew Borman; KLASON, PETER
Cc: Gerard Horner; Brad Botwin; Mira Ricardel
Subject: RE: Uranium 232

Matt:

This looks fine to Peter and me.

John

-----Original Message-----

From: Matthew Borman [mailto:Matthew.Borman@bis.doc.gov]
Sent: Wednesday, January 17, 2018 11:15 AM
To: MASTERSON, JOHN T (Federal) <JMASTERSON@doc.gov>; KLASON, PETER (Federal) <PKLASON@doc.gov>
Cc: Horner, Gerard <Gerard.Horner@bis.doc.gov>; Botwin, Brad <Brad.Botwin@bis.doc.gov>; Ricardel, Mira <Mira.Ricardel@bis.doc.gov>
Subject: FW: Uranium 232

Proposed response:

Commerce's Bureau of Industry and Security is reviewing the petition to determine if it contains sufficient information to initiate an investigation. There is no deadline for completion of this initial review, but Commerce will look to conclude its review quickly.

-----Original Message-----

From: Matthew Borman
Sent: Wednesday, January 17, 2018 11:12 AM

To: 'Rockas, James (Federal)'; EComstock@doc.gov
Cc: Mira Ricardel; Eugene Cottilli; MASTERSON JR., JOHN (jmasterson@doc.gov); KLASON, PETER
Subject: RE: Uranium 232

We will draft a response for you.

-----Original Message-----

From: Rockas, James (Federal) [mailto:JRockas@doc.gov]
Sent: Wednesday, January 17, 2018 10:34 AM
To: Matthew Borman; EComstock@doc.gov
Subject: FW: Uranium 232

??? Any idea on this?

James Rockas

Press Secretary & Deputy Director of Public Affairs

U.S. Department of Commerce

(202)394-5919 (c) | (202)482-4883 (o)

jrockas@doc.gov <mailto:jrockas@doc.gov>

signature_392612125

From: Isabelle Hoagland <ihoagland@iwpnews.com>
Date: Wednesday, January 17, 2018 at 10:29 AM
To: Rockas <JRockas@doc.gov>
Subject: Uranium 232

Hi James,

What are the next steps for the Uranium 232 petition filed by Ur-Energy USA Inc. and Energy Fuels Resources Inc. yesterday?

<http://s3.media.squarespace.com/production/503515/5753593/2018.01.16+-+Petition+-+Signed+Version.pdf?AWSAccessKeyId=AKIAIGASFZJDTI4L3CAA&Signature=DK1bcAdRK6zLQmAwvMfaP7dHSx4%3D&Expires=1516202419>

How long does the Commerce Dept. have to decide whether to initiate the investigation -- at which point the 270-day clock begins?

Best,

Isabelle

Isabelle Hoagland

Associate Editor

Inside U.S. Trade <<http://www.insidetrade.com/>>

o: 703-562-8782 | c: 315-481-3785

Grace Agyekum

From: Mira Ricardel
Sent: Tuesday, January 16, 2018 5:55 PM
To: Brad Botwin; Richard Ashooh; Matthew Borman; Daniel Hill; MASTERSON JR., JOHN; KLASON, PETER
Cc: Gerard Horner; EComstock@doc.gov; SLeach@doc.gov; Alexander Zemek; Erika Maynard; David Boylan; Mark Crawford; Kathleen Barfield; PDavidson@doc.gov
Subject: RE: URGENT: Section 232 Petition Delivery - Uranium

Brad,

Thanks. We need to review the petition and have our legal team and EA review whether there is adequate information and a basis for proceeding under 232. I have sent the Secretary an email – copying Earl and Wendy – to tell him that it has come in and that we are reviewing it.

Best,
Mira

From: Brad Botwin
Sent: Tuesday, January 16, 2018 5:02 PM
To: Mira Ricardel <Mira.Ricardel@bis.doc.gov>; Richard Ashooh <Richard.Ashooh@bis.doc.gov>; Matthew Borman <Matthew.Borman@bis.doc.gov>; Daniel Hill <Daniel.Hill@bis.doc.gov>; MASTERSON JR., JOHN <JMASTERSON@doc.gov>; KLASON, PETER <PKLASON@doc.gov>
Cc: Gerard Horner <Gerard.Horner@bis.doc.gov>; EComstock@doc.gov; SLeach@doc.gov; Alexander Zemek <Alexander.Zemek@bis.doc.gov>; Erika Maynard <Erika.Maynard@bis.doc.gov>; David Boylan <David.Boylan@bis.doc.gov>; Mark Crawford <Mark.Crawford@bis.doc.gov>; Kathleen Barfield <Kathleen.Barfield@bis.doc.gov>
Subject: URGENT: Section 232 Petition Delivery - Uranium
Importance: High

All,

Erika and I were just called down to the front lobby to pick up a delivery. The box that was hand-delivered to us is the hard copy of Section 232 Petition regarding uranium imports which is being officially filed by two U.S. uranium producers - Energy Fuels Resources and Ur-Energy USA. This is a bit earlier than we expected!

We have been given five hard copies of the petition which is addressed to Secretary Ross and dated January 16, 2018.

We have requested that the Petitioners send us these documents electronically as well.

We will distribute the hard copies of the petition. Can someone with a swipe card help us bring one copy up to the 5th floor.

Right now, we are trying to finish aluminum.

Thanks.

Brad

Office of Technology Evaluation (OTE) 2017 – Looking Back

Monitoring the Strength of the U.S. Defense Industrial and Technological Base

BIS conducted the following industrial base survey and assessment activities:

- *Industrial Capabilities Assessment* for the Defense Security Service (DSS) of the U.S. Department of Defense. Approximately 13,000 cleared facilities are being surveyed and assessed over a three-year period.
- *U.S. Semiconductor Design and Fabrication Industry Assessment*. Approximately 400 surveys have been received, and BIS is currently conducting analysis activities and preparing the final assessment report.
- *U.S. Textile, Apparel, and Footwear Industry Assessment* for Senator Shelby of the U.S. Congress and to date, BIS has received approximately 600 surveys and preparing the final assessment reports.
- *U.S. Air Force C-17 Aircraft Supply Chain Impact Assessment* for the Department of Defense's Office of Economic Adjustment. The survey will gather information of approximately 700 companies.
- *U.S. Rocket Propulsion Industrial Base Assessment* for the U.S. National Aeronautics and Space Administration (NASA) Marshall Space Flight Center. Approximately 400 surveys will be included in the final dataset.
- *U.S. Bare Printed Circuit Board Supply Chain Assessment* for the U.S. Navy, Naval Surface Warfare Center, Crane Division. BIS received 185 completed PCB company surveys and is currently conducting analysis activities and preparing the final report.

Section 232 Investigations

- OTE, as well as other BIS representatives are supporting two Section 232 investigations initiated in FY 2017 by the Secretary of Commerce involving steel and aluminum products. The comprehensive investigations will determine the effects of imports of these products on the national security of the United States. The Department of Commerce heard testimony and received public comments from a wide range of respondents on a variety of issues relevant to the Section 232 steel and aluminum investigations. BIS is working diligently to complete the 232 reports by the January 2018 deadline.

Executive Orders Related to Assessing the Defense Industrial Base

- In response to two of President Donald Trump's Executive Orders, OTE is providing support including data analysis and written reports for Executive Order 13786 – to produce an omnibus report on the effects of significant U.S. trade deficits with foreign countries, including the effects the deficits have on the defense industrial base and national security; and Executive Order 13806 – to assess and strengthen the manufacturing and defense industrial base and supply chain resiliency of the United States.

Data Analysis and Metrics

- OTE continues to support all offices in BIS by providing data analysis of license processing and export activity. OTE created a new compliance portal to automate the targeting of compliance activities by EA's compliance divisions.
- OTE continues to work closely with U.S. Customs and Border Protection and the U.S. Census Bureau to maintain an effective export data collection Automated Export System. Along with the OCIO, OTE effectively entered into a new data exchange agreement with CBP that allows BIS to receive complete export data more timely.

2018 – Looking Ahead

DIB Activities

- Many of the industry sectors currently surveyed and being assessed, the 232 reports, and support of the Executive Orders will be completed by the 2018 deadlines.
- Additional agreements are being discussed with the Air Force regarding an aircraft assessment, as well as SPAWAR regarding a cyber assessment.
- OTE believes additional 232 investigations will also be forthcoming, in particular one on Uranium.

Data Analysis

- OTE will continue to work with CBP to deploy a multi-dimensional edit in AES, that will warn U.S. exporters and their authorized agents who inadvertently or not report controlled items under the “No License Required” designation to a controlled destination. This change will cleanse the export data OTE uses in supporting the BIS policy decisions.
- OTE will continue to explore new solutions to data collection and analysis, including using best practices of other agencies that have had success in creating data warehouses. This will also include improving BIS's capability in visualization of threats by bad actors.